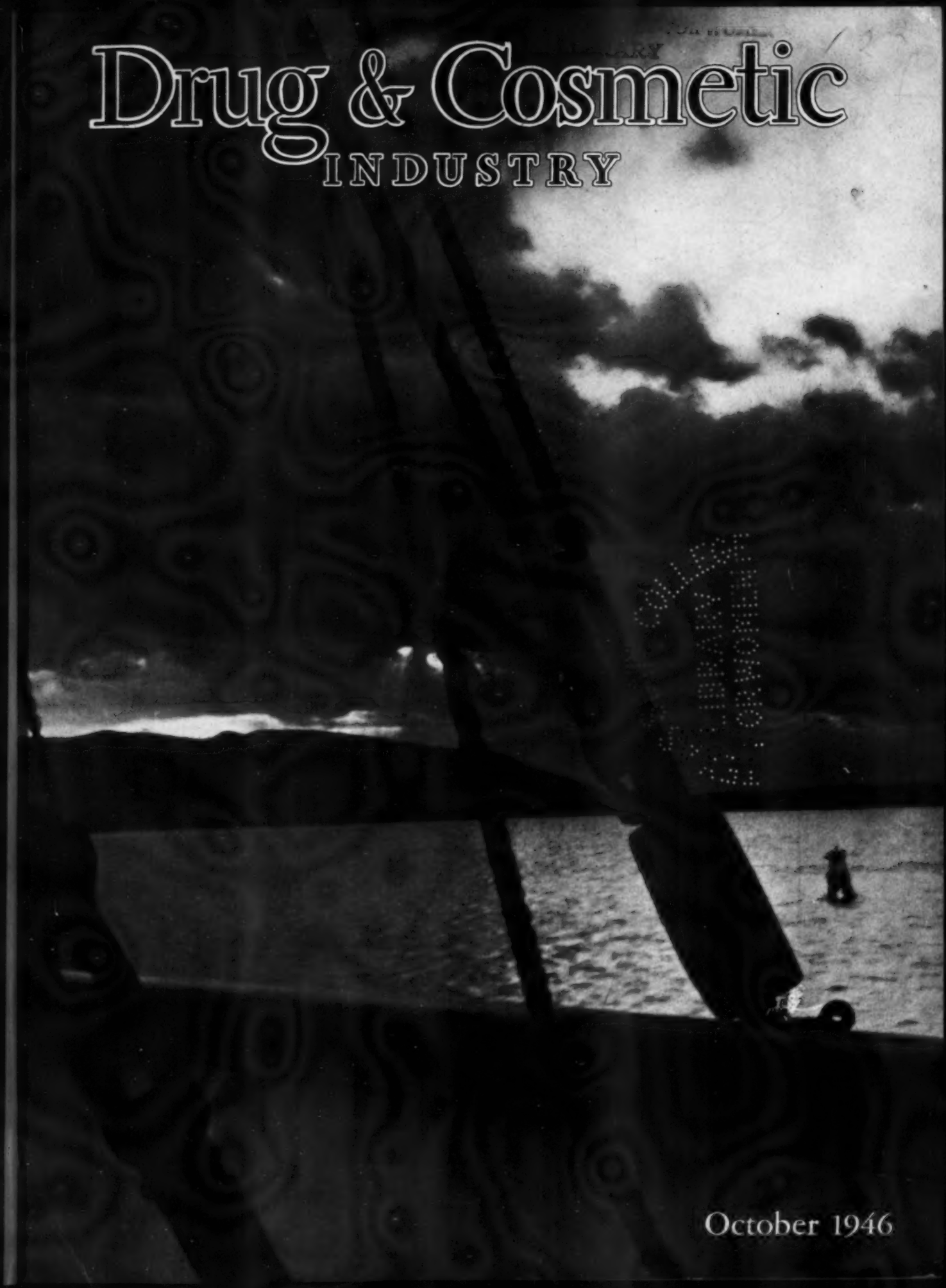
Drug & Cosmetic INDUSTRY



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Drug & Cosmetic INDUSTRY

OCTOBER 1946

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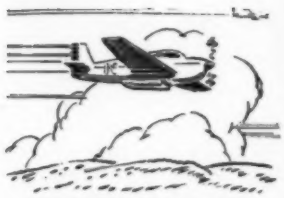

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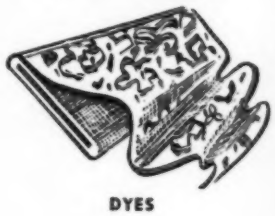

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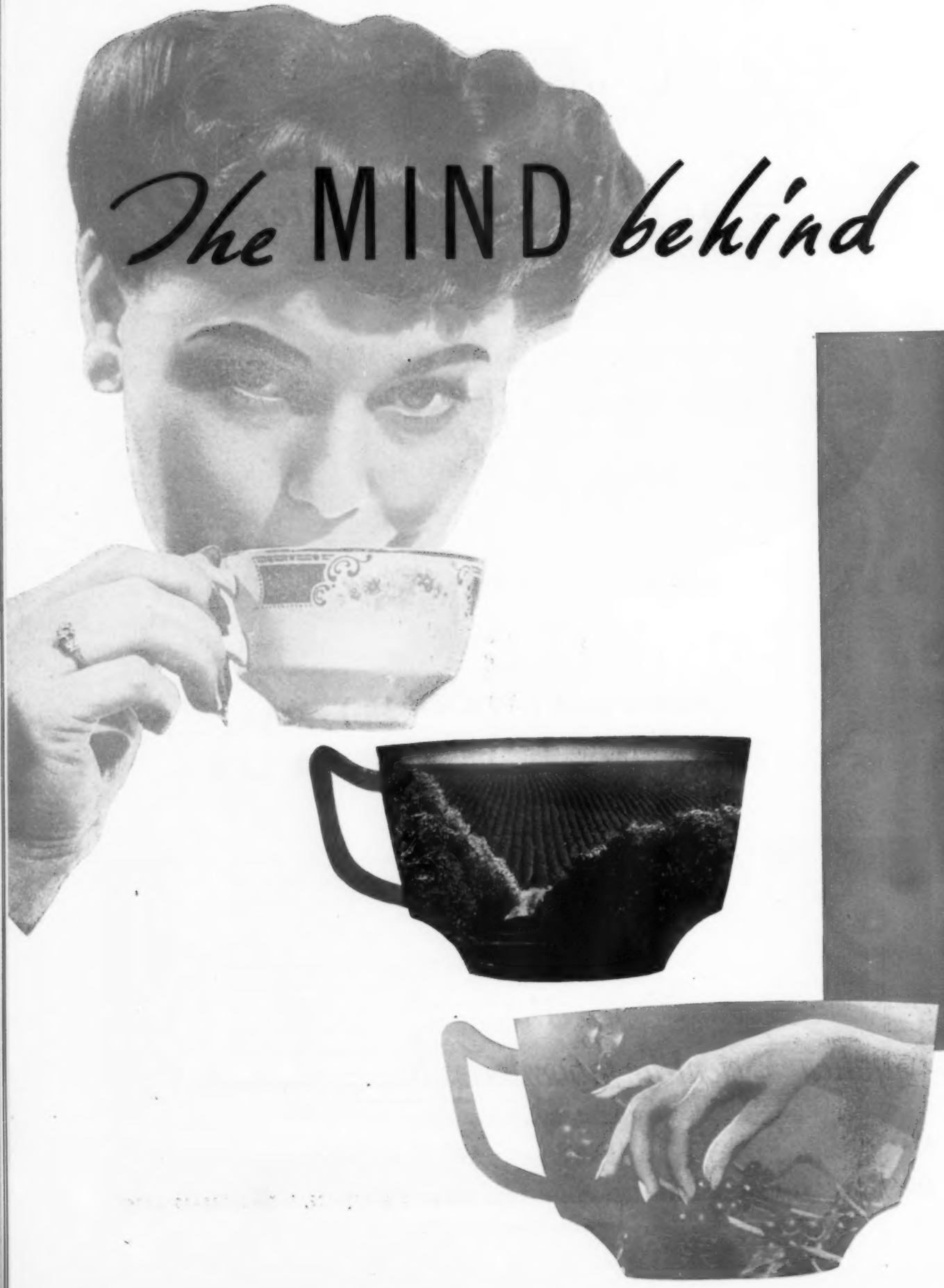
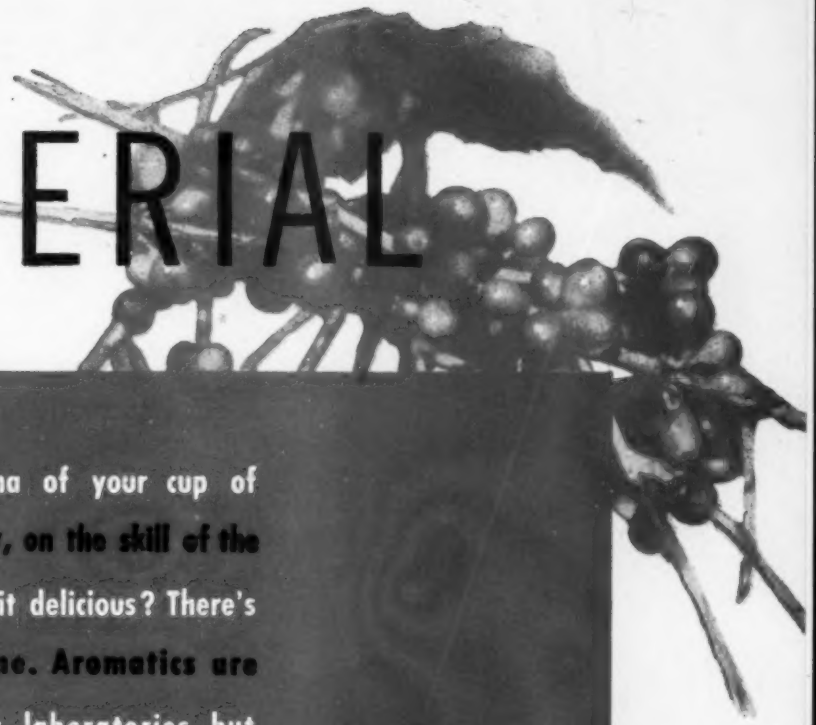


the MATERIAL



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This editorial is another example of American Druggist's willingness and ability to discuss the real issues with courage, clarity and vigor.

American Druggist
SEPTEMBER 1946

Distribution Trends

Two entirely different trends are apparent not only in the drug trade but in jewelry, hardware, electrical, and other trades. We anticipate that disorderly stores masquerading as drug stores will disappear, but the good drug stores, both large and small, will last longer than many products they now sell.

There have always been changes in the kind of products sold by drug stores, but there have always been drug stores and there always will be. If we did not think so, we would quit publishing this magazine. Our whole future is wrapped up in the continued success of able independent druggists and we have complete faith in their ability to meet these changes.

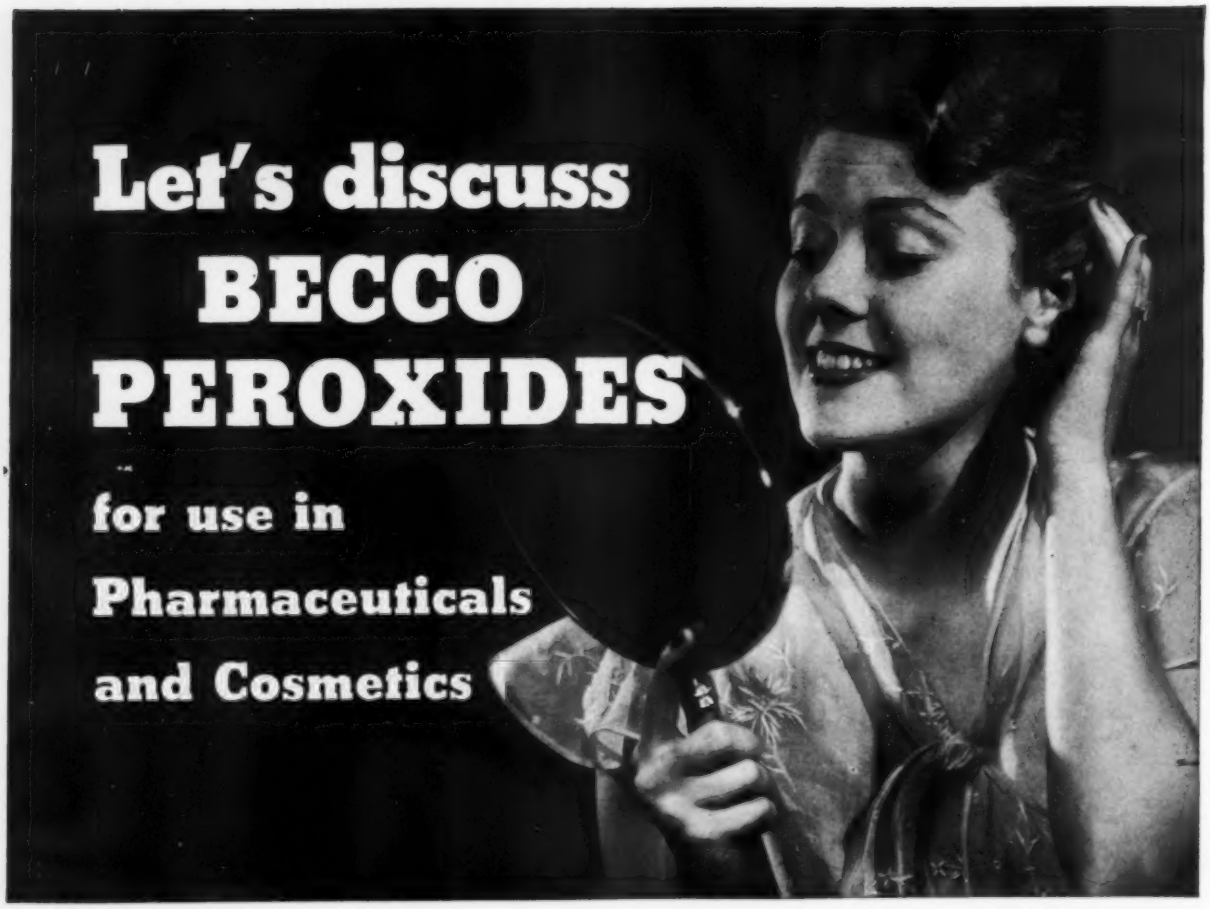
The first trend indicates that ordinary non-prescription items requiring little or no retail sales ability are likely to be sold wherever the public will buy them. Some of these common products may eventually be sold by slot machines on street corners, but no drug store, worthy of the name, is dependent upon such items for its existence. Nevertheless, although products of this type need and deserve no selling energy, they should be displayed and used as traffic builders by drug stores as well as other stores.

The other and equally significant trend is toward more selective distribution of quality items that must have store support. Manufacturers of distinctive high grade cosmetics and sundries are beginning to restrict their distribution to drug stores, department stores, and other stores that reflect quality and integrity. Those who are selecting retail outlets according to appearance and reputation, rather than size and volume, are getting the active support of independent druggists who operate high grade drug stores.

Many store improvements are now being made by druggists, and no manufacturer of a quality item that needs retail selling effort should overlook any druggist who requests consideration of his store as a desirable outlet. Whether his drug store is large or small, he deserves favorable consideration providing his drug store is clean, attractive, and well arranged for merchandising quality items.

To say that these trends in distribution of non-pharmaceutical products are going to put retail druggists out of business is an insult to every self-respecting druggist. On the contrary, we believe that these developments will result in more distinctive drug stores and better public regard for pharmacy itself.

John W. McFerrin
EDITOR



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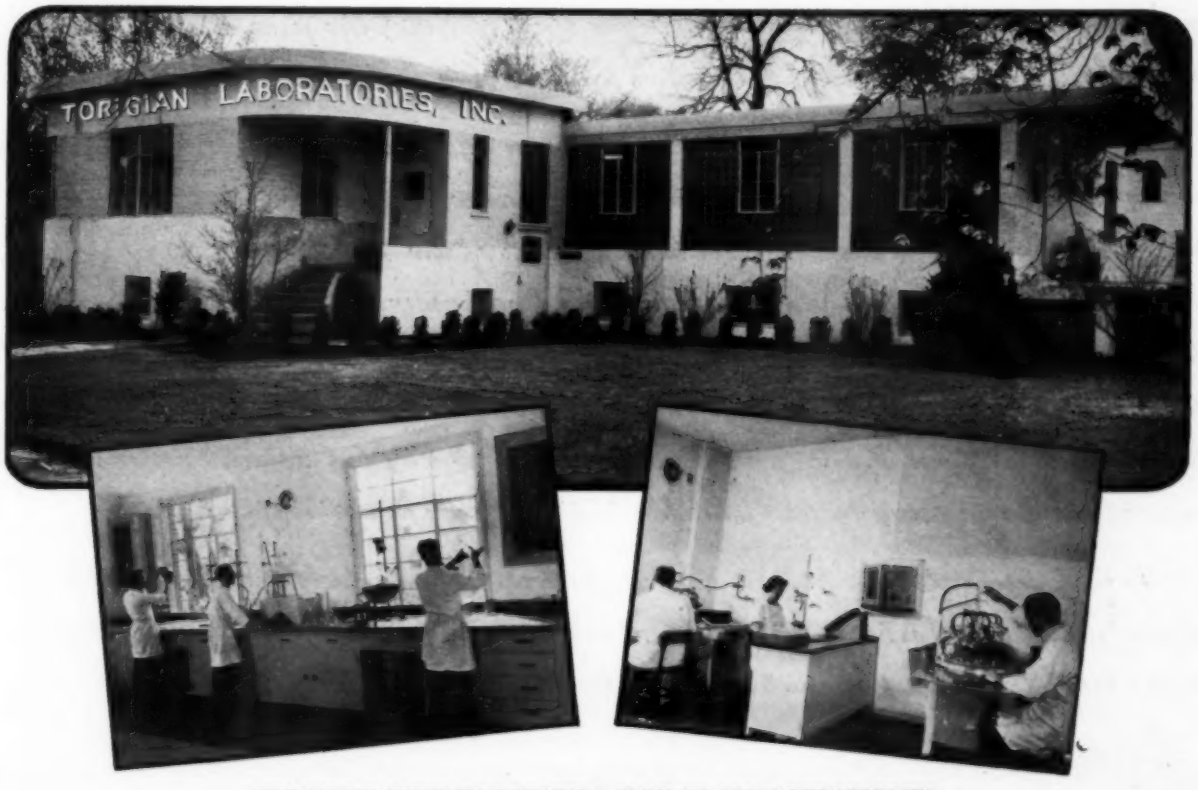

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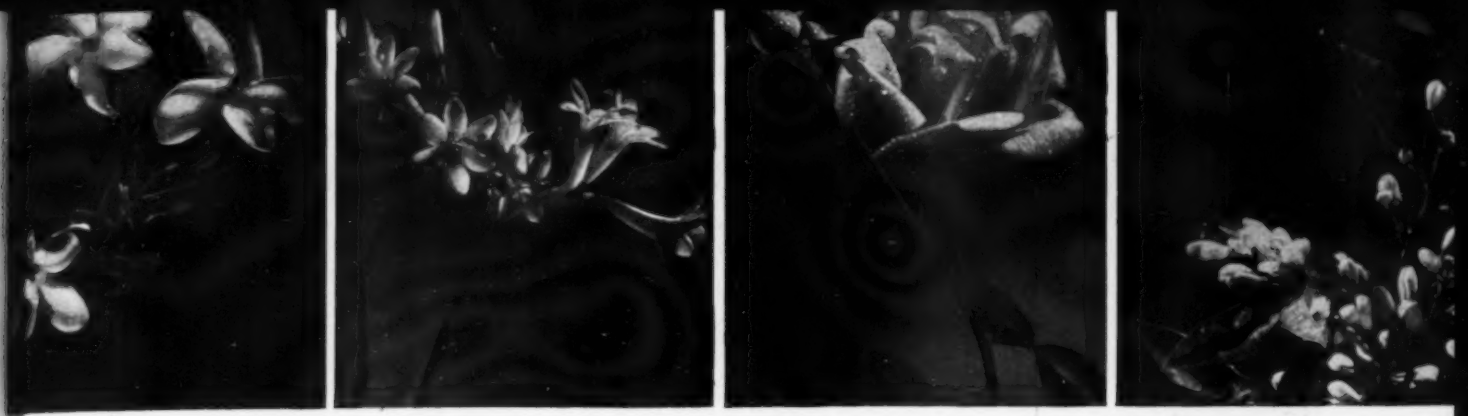

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Bar-Sur-Loup, France

... bringing to American perfumers an assured supply of the fine products of this famous old house in the heart of the Grasse area

FLORAL OILS are again available, although still in limited quantities — and again the house of Albert Verley & Company is satisfied to offer you only the finest.

Introduced to the American market by Albert Verley & Company before the war, the natural floral absolutes and special oils of V. Mane Fils had been famous in France through several generations. Since 1871, this well-known house has supplied materials to many of the largest perfume establishments in France and elsewhere, as well as to other manufacturers in the Grasse area.

The house of V. Mane Fils operates the largest distillery in France devoted to the production of Lavender. It is noted for its Lavender Barreme, Iris, Mousse de Chene, Pommades, and other specialties — as well as a complete line of floral essences, absolutes, resinoids, essential oils, and constituents of essential oils.

Here at Bar-sur-Loup — in the heart of the Grasse area in close proximity to the flower fields — rich, fresh flowers quickly reach the various strategically-located plants of V. Mane Fils for immediate extraction. This makes for the finest possible Absolutes which have the total character of the living flowers.

As in other departments of perfumery, you can look to Albert Verley & Company for the fine natural materials you need for that extra note of distinction. Write for price list and availabilities.

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Headquarters for Odor Appeal

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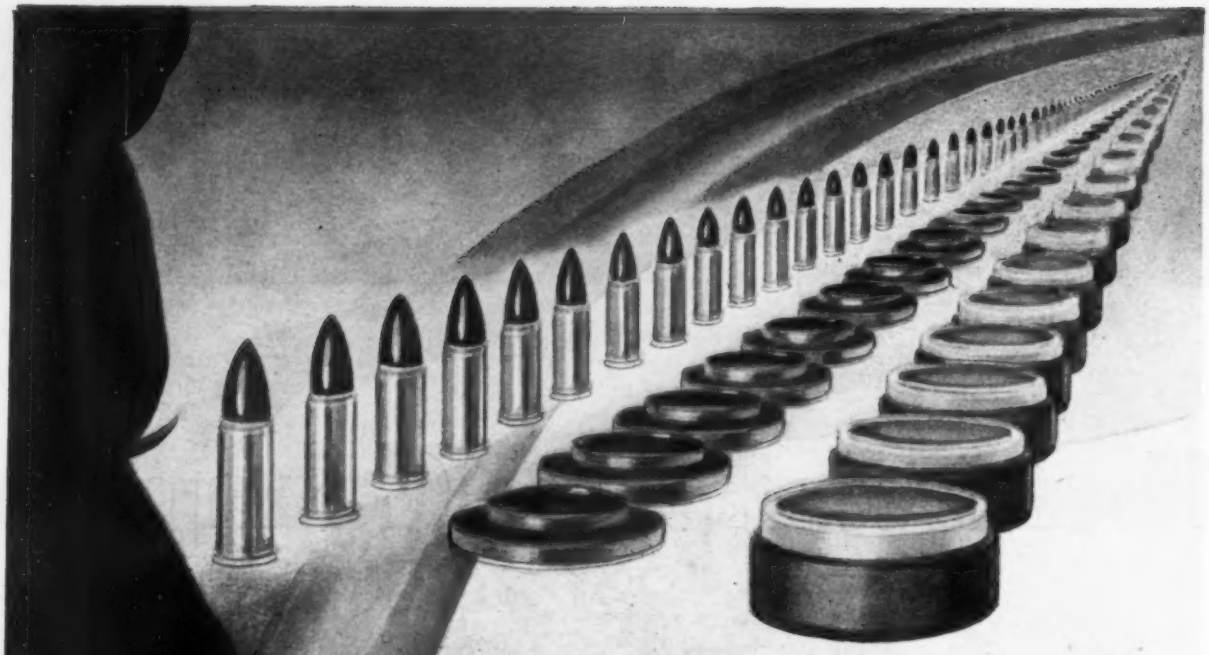

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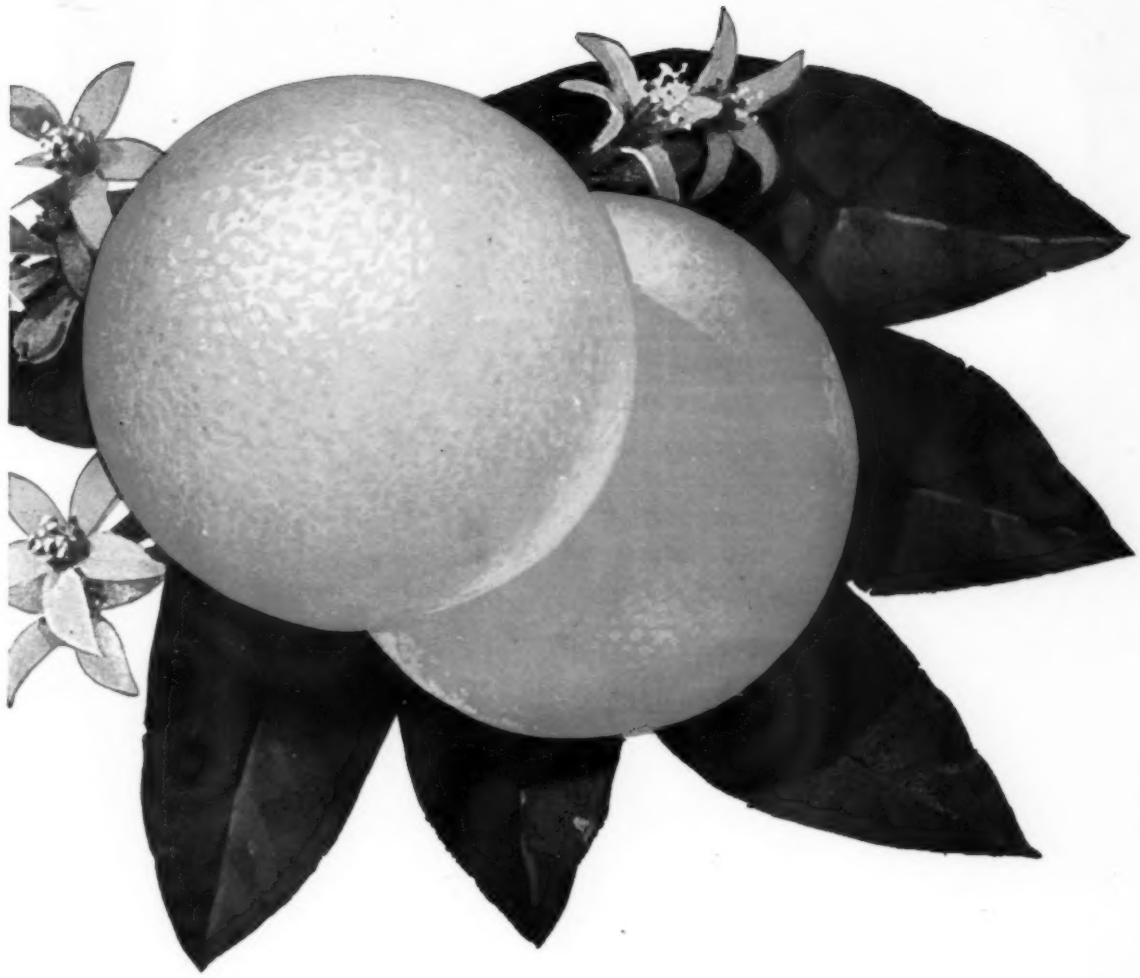

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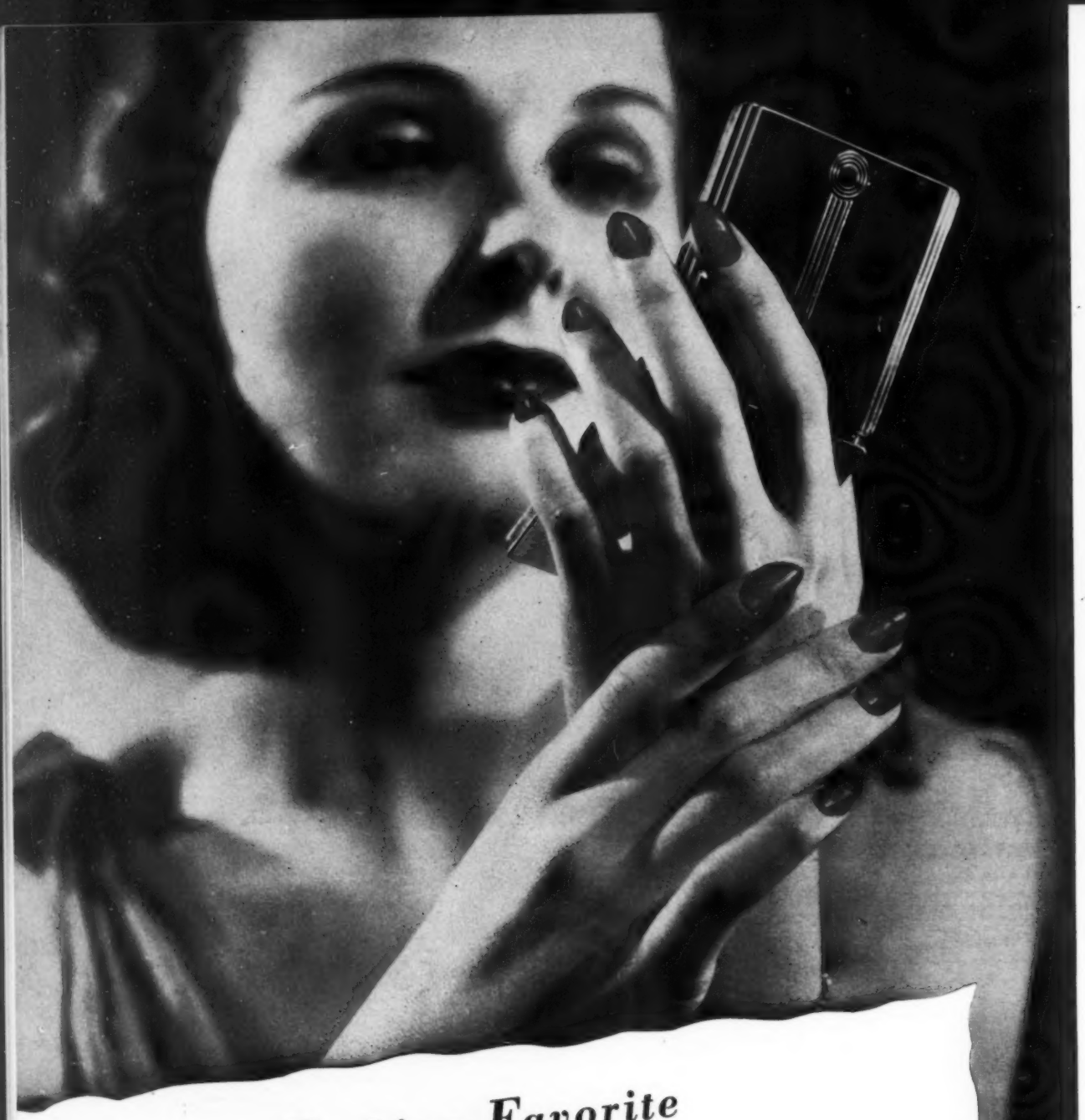

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NAIL ENAMEL, fashion's favorite in cosmetics, is a *must* in your make-up line. Include top quality nail enamel in shades that are fashion right and in color harmony.

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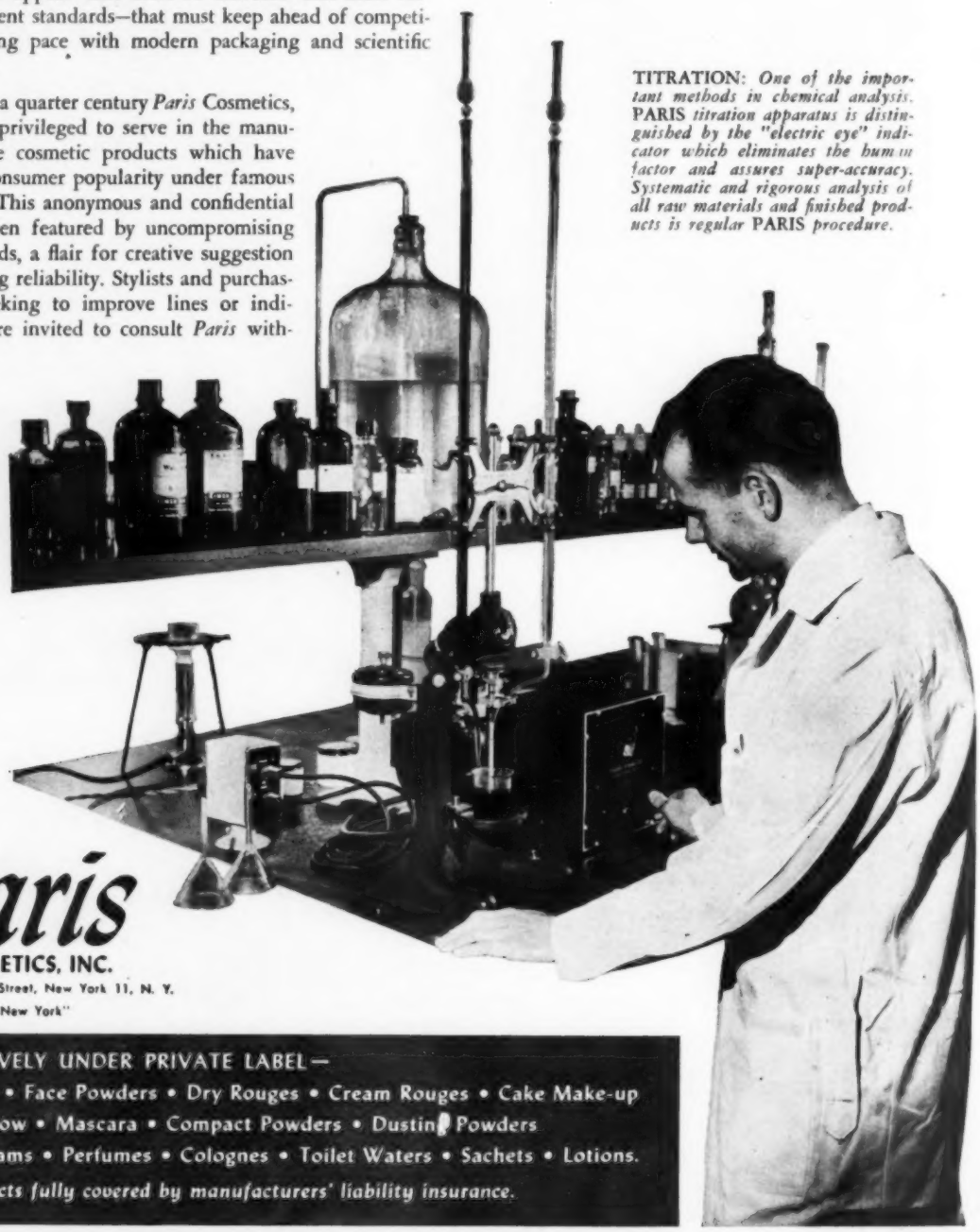

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In step with ever-increasing demand for Atlas emulsifiers, Atlas research has made continuous progress toward even finer types of emulsifiers to meet the exacting needs of the cosmetic and drug industries. New techniques, developed in war, have been turned to peace-time products with marked success. The new series of ARLACEL emulsifiers is the result.

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Hydroxycitronellal continues to be in short supply. And the prospects for increased supplies in the near future are not at all promising. However, there is a way out of this impasse: discriminating perfumers who have examined and compared the odor and fixative properties of Hydroxol 1696 have found that there is no let-down in the quality of fine compositions in which this product is used in place of Hydroxycitronellal.

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ALDEHYDE FK—Basis for Lilacs to create a richer stronger Lilac Odor. Add up to 10% Aldehyde FK.

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[1]*The Journal of Laboratory and Clinical Medicine, 31:3, 313-316, March 1946.*

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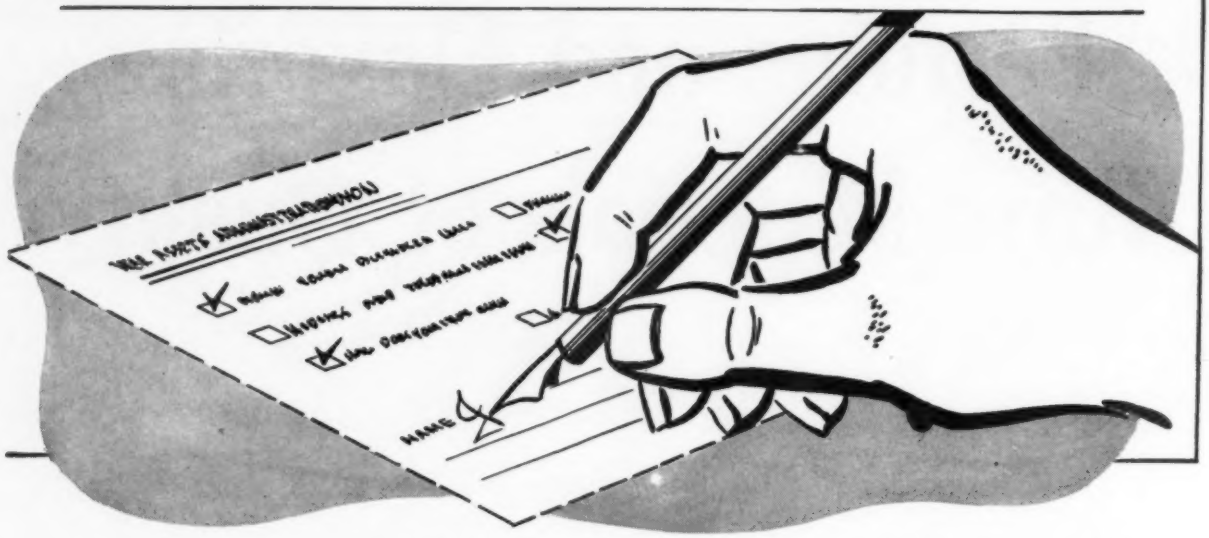

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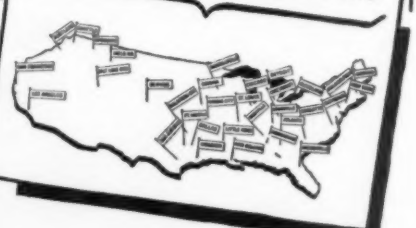

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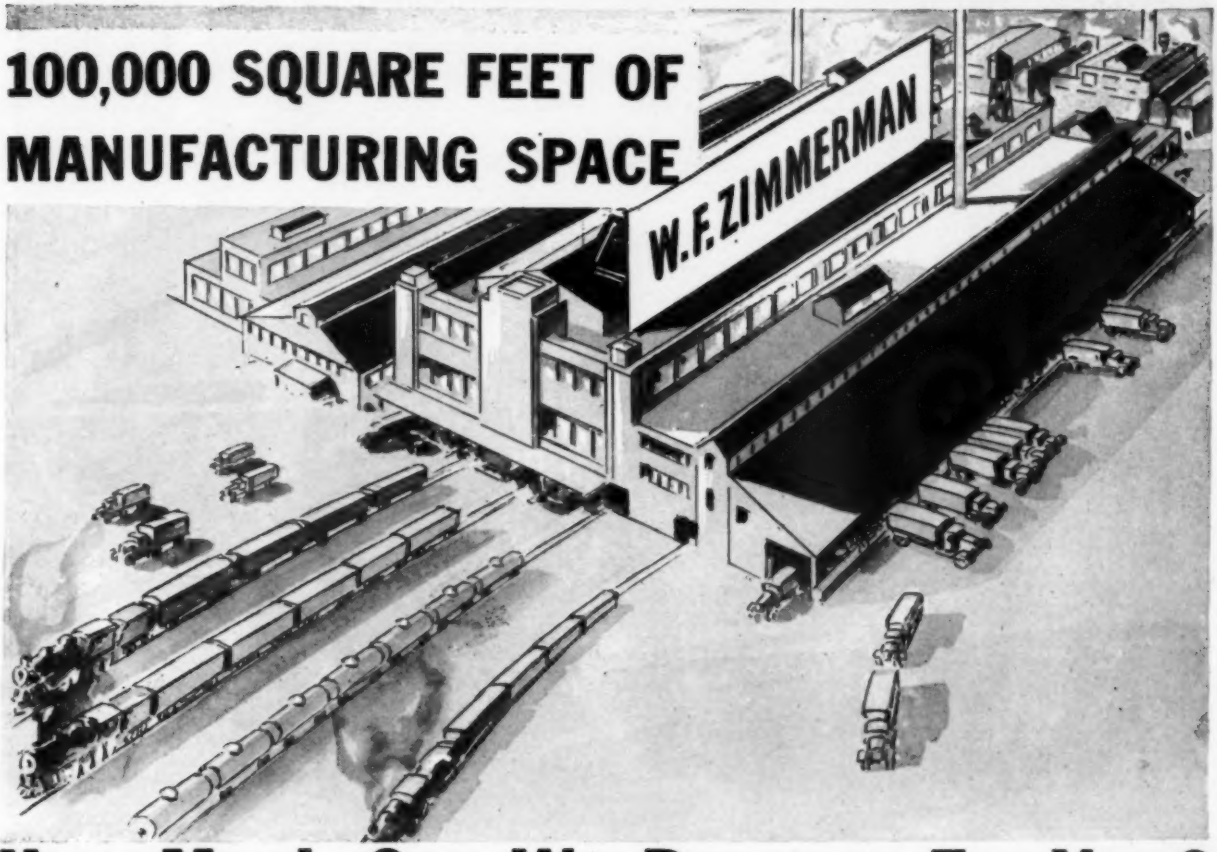

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Yes, we have 100,000 square feet of the finest manufacturing space in the country—100,000 square feet ready to go to work to produce your cosmetics of superior quality in every classification, bulk or packaged.

What's more, our modern *high speed* production lines will cut your costs of both distribution and packaging. Our two factories are fully staffed to handle any order. Our exacting supervision insures accurate formulas and prompt deliveries. Railroad sidings on our premises speed up receiving and shipping 100%.

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Evans Chemetics INC.

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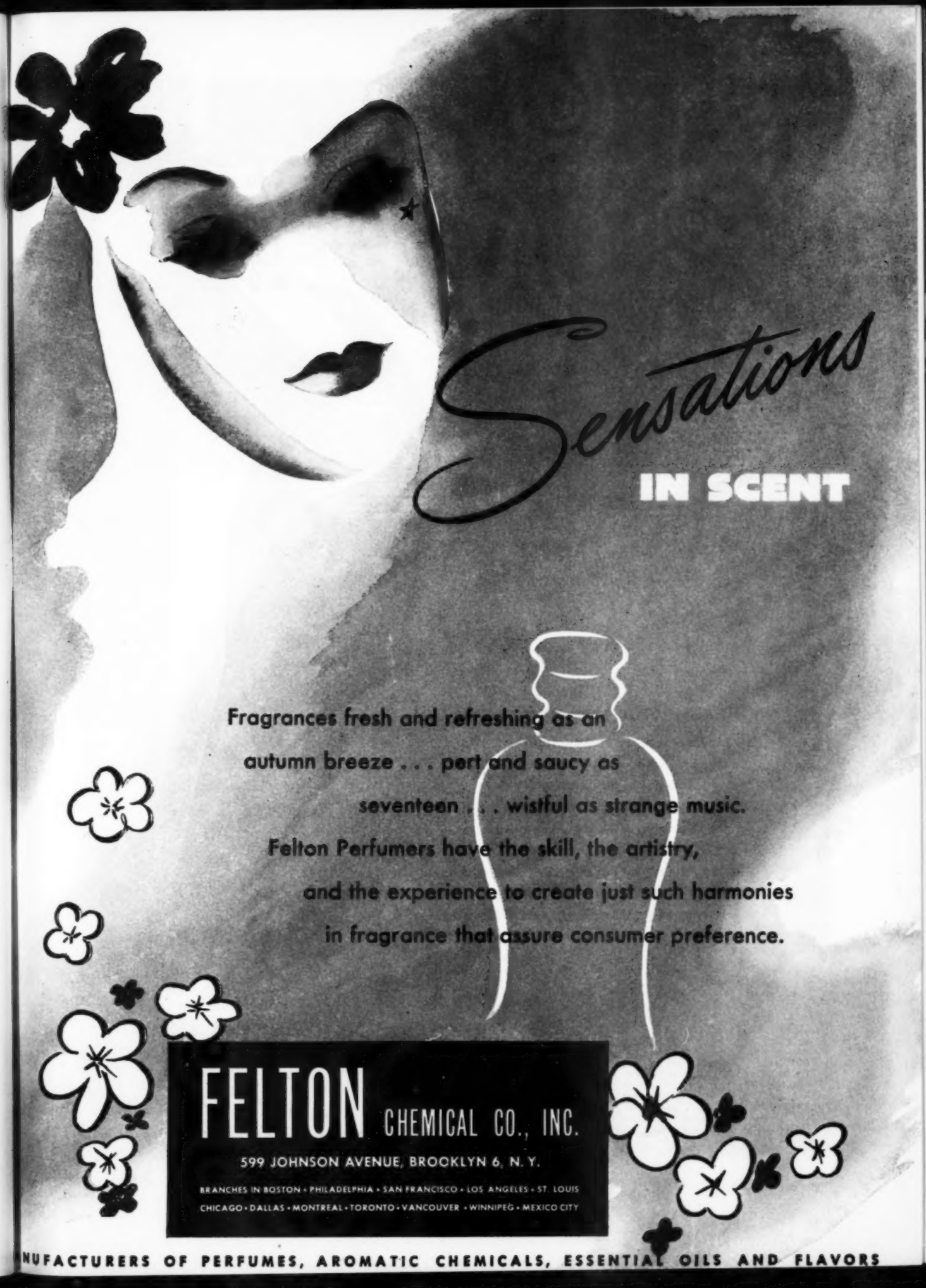
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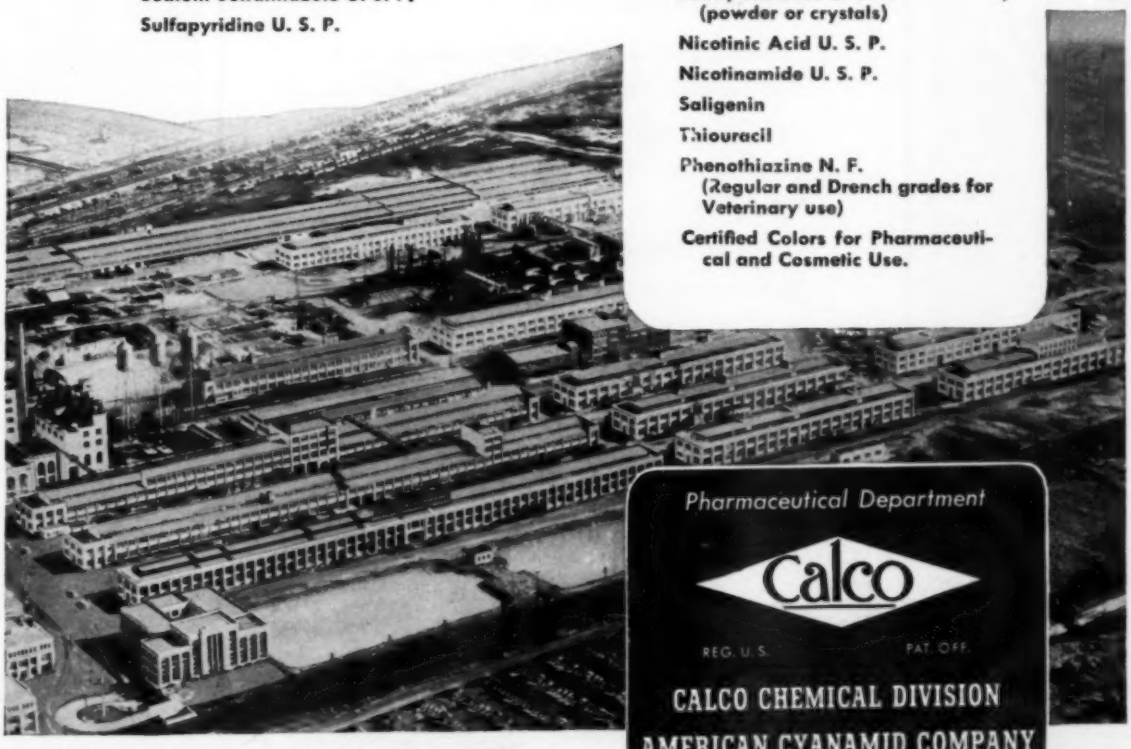

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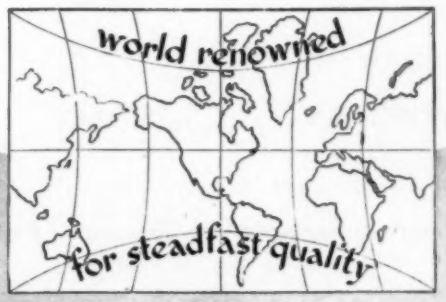

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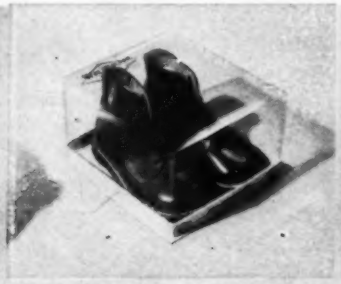

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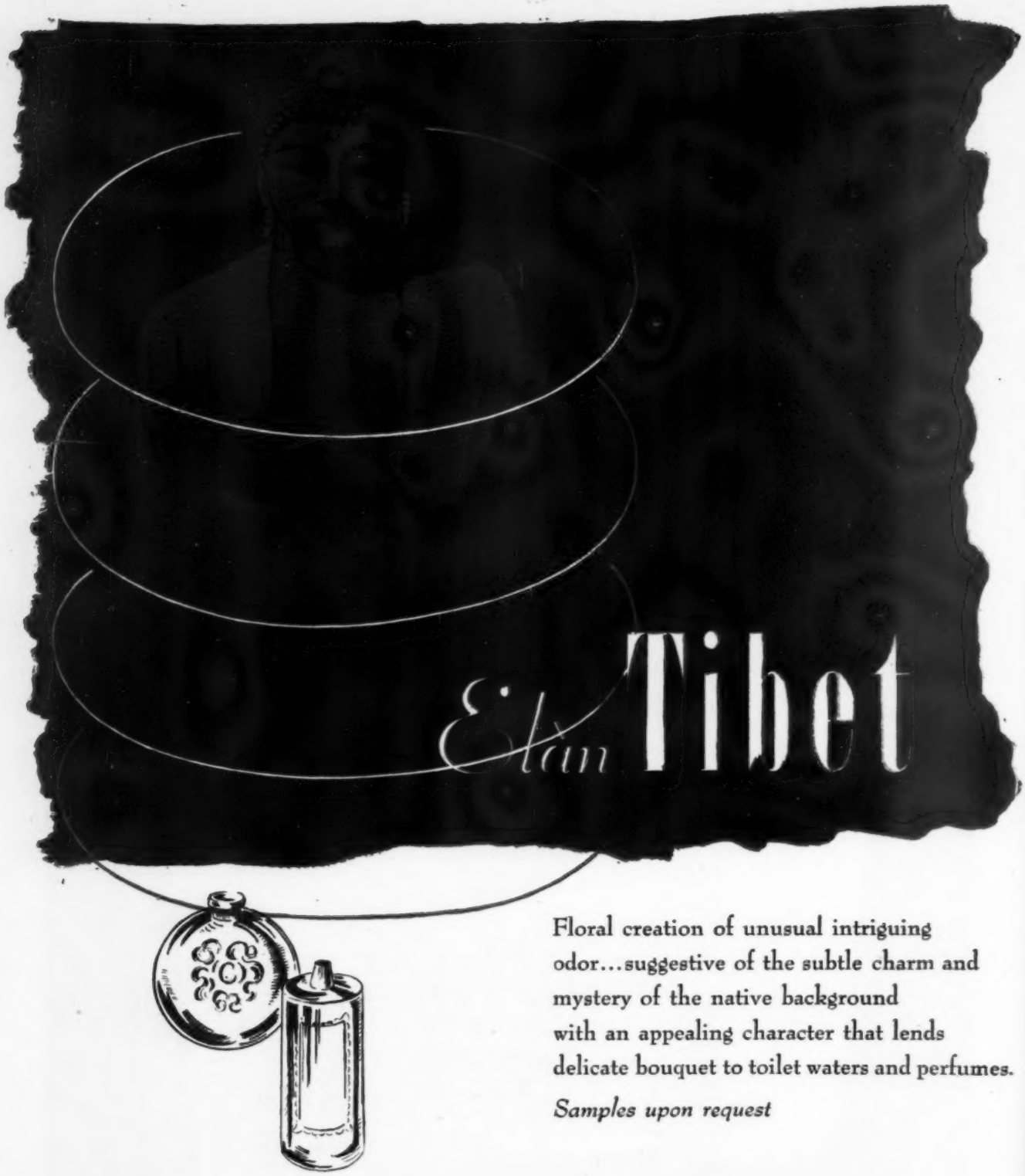

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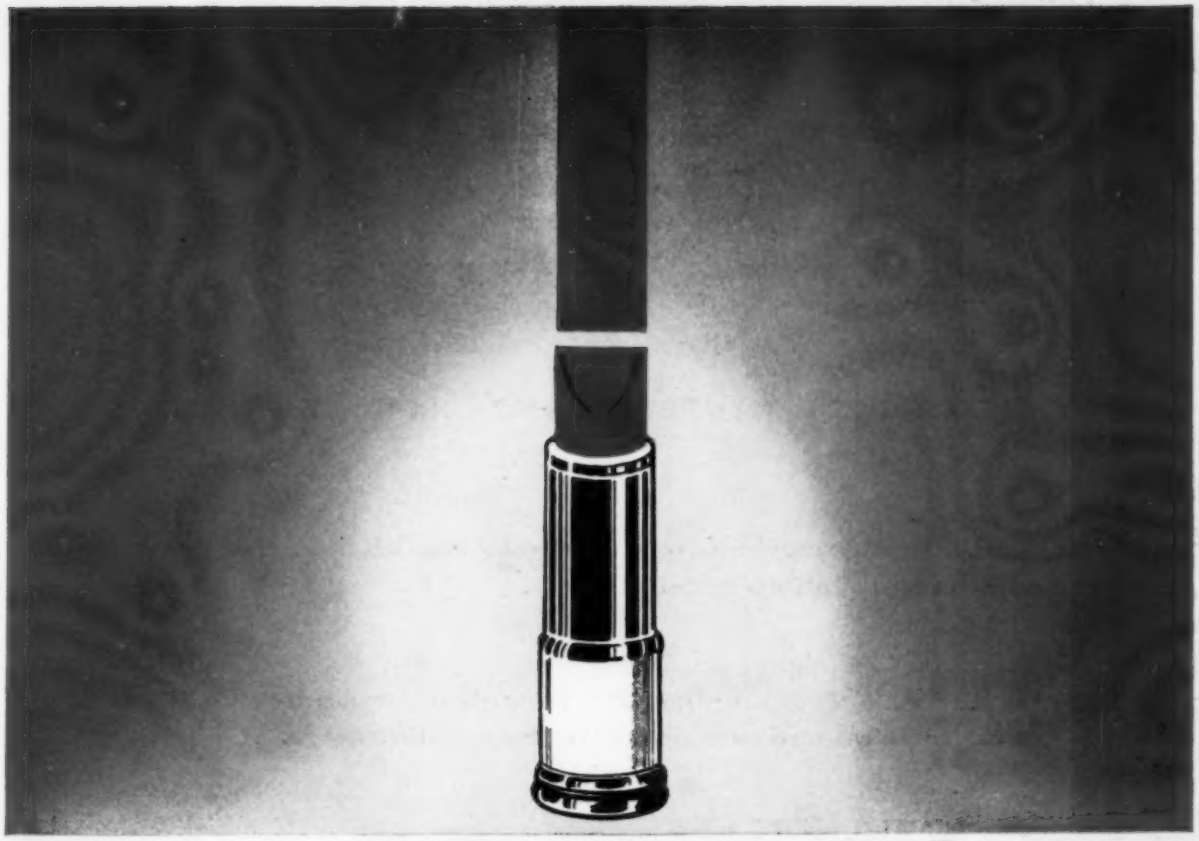

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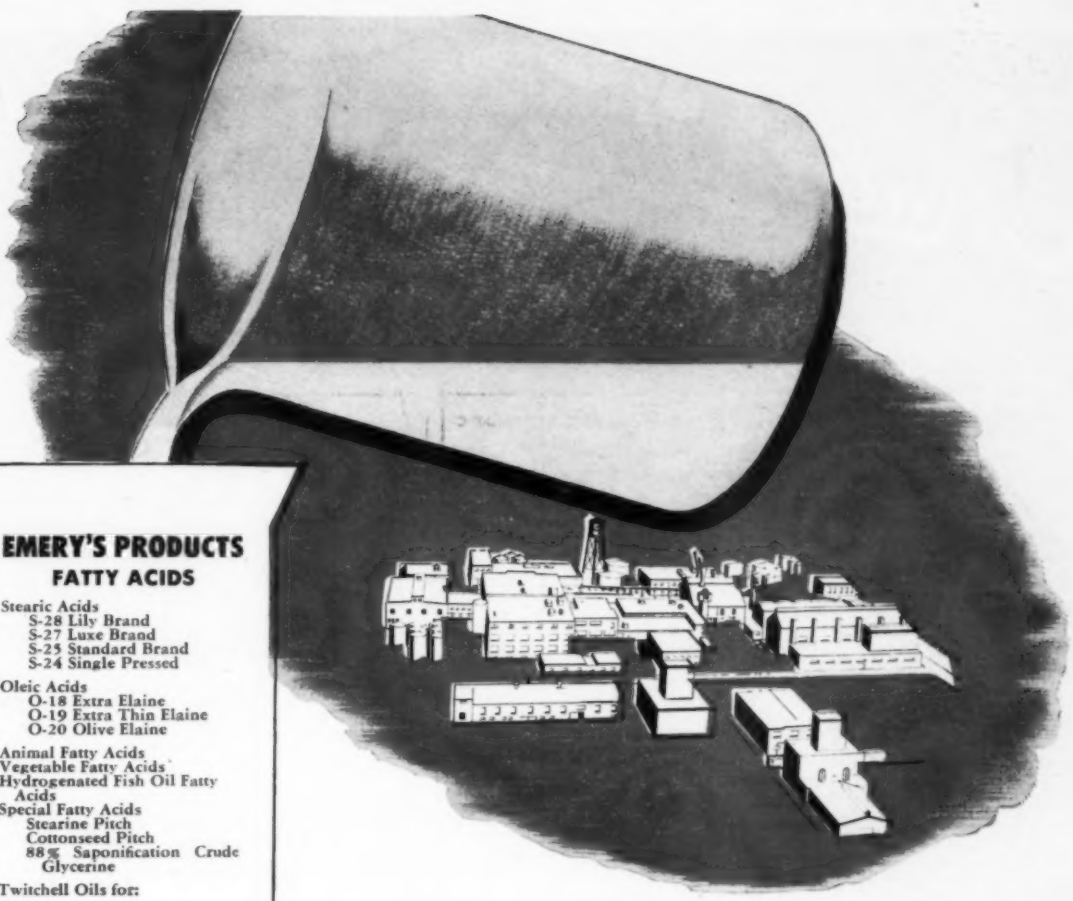

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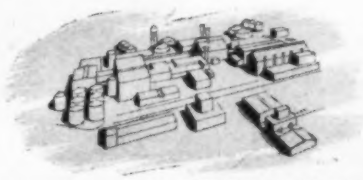

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PRODUCT	Bulk (fl. oz. per lb.)	Metallic Oxide	Acetone Extractable*	Melting Point†	Soluble or Dispersible	Special Characteristics	Uses
Aluminum Stearate Technical H [$Al(OH)_2St$]	50-55	14-15%	6.5-7.5%	190-200° C	In hot chlorinated solvents—$CHCl_3$, CCl_4, etc., mineral oils and waxes, vegetable oils, waxes and turpentine, fatty acids, cyclic solvents—benzine, naphtha, etc., and sulfonated oils. Hot solutions generally form gels on cooling.	High metallic oxide content	1, 8
Aluminum Stearate Technical D [$Al(OH)_2St$]	50-55	8.4-8.7%	6-7%	155-160° C			1, 2, 3, 4, 8
Aluminum Stearate Technical D 5-48	45-50	8.7-9.0%	6-7%	155-160° C		Especially strong gelling action	1
Flatting Agent No. 22	65-70	8.4-8.7%	6-7%	145-150° C		Good flatting action.	3
Aluminum Stearate Fluffy	60-65	8.4-8.7%	6-7%	145-150° C		Similar to Tech D but softer and more bulky.	1, 4, 8
Aluminum Stearate Technical T-D	85-95	7.5-8.0%	12.5-13.5%	125-130° C		Intermediate between Tech D and Tech T, but softer and more bulky than either.	1, 4, 9
Aluminum Stearate Technical T [$Al(OH)St_2$]	60-65	6.0-6.5%	24-25%	105-110° C			1
Ammonium Stearate Technical	30-35	5.5-6.0% (NH_3)	decomposes	decomposes	Soluble in cold water. Decomposes in organic solvents.	A granular, free-flowing product approx. 100% ammonium stearate. Readily loses NH_3 content, leaving water-insoluble stearic acid.	1, 5, 7, 8
Calcium Stearate Technical	45-50	8.8-9.3%	1-2%	145-150° C	No		3, 4, 5, 8
Calcium Stearate Impalpably Powdered	120-130	8.8-9.3%	0.5-1%	145-150° C			3, 4, 5, 7, 8, 10
Magnesium Stearate Impalpably Powdered	105-110	7.5-8.0%	0.5-1%	125-130° C	Partially soluble hot in mineral oils and waxes, vegetable oils, waxes and turpentine, fatty acids.		1, 4, 5, 7, 8, 10
Sodium Stearate Technical	35-40	9.5-10.5%	—	180-185° C	Water, lower alcohols, mineral oils and waxes, fatty acids.		7, 10
Zinc Stearate Technical	130-140	14.0-14.5%	1-2%	112-117° C	Chlorinated solvents—$CHCl_3$, CCl_4, etc., vegetable oils, waxes and turpentine, fatty acids, cyclic solvents—benzine, naphtha, etc.		3, 5, 6, 8
Zinc Stearate U.S.P. XII	120-130	14.0-14.5%	2-2.5%	112-117° C			3, 5, 10

* Extracted with boiling acetone. † Determined in capillary tube.
Alkali salts and water content of stearates (excepting Sodium Stearate Tech.) is limited to 1% and is usually less.

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McKesson Then and Now

IT WAS in August, 1928 that McKesson & Robbins, under F. Donald Coster, announced its merger with fifteen of the well established wholesalers throughout the country. This was a startling announcement. Many people throughout the industry thought that the enterprise would not survive, or at least would not prove to be a profitable venture for the stockholders. Wholesalers who were not included in the merger were both frightened and distrustful of this new octopus in drug wholesaling. Manufacturers were not pleased at the picture of the pressure that might be applied to them.

However, the new McKesson & Robbins went on its way and continued to absorb still more wholesale houses until they had some 66 wholesale branches throughout the nation. Then came the crash. In December, 1938, the petition in bankruptcy was filed and the Coster scandle broke. To many, McKesson & Robbins looked like a dead duck and those who had predicted failure for the new combination were gloating that they had the right dope from the start.

That is why the latest financial report for the fiscal year ending June 30, 1946 makes such interesting reading. It shows a record consolidated net profit of $8,586,157 after all charges including provision of $10,394,313 for Federal income and excess profits taxes, and, after provision for preferred stock dividends, earnings per share of common stock was $4.74. Sales for fiscal year totaled $338,046,788. Net current assets rose to $60,320,510. Current assets were $84,307,271 and current liabilities $23,986,761.

Advancing Prices

VERY few manufacturers in this industry will long be able to resist the pressure to advance their prices as the result of rising costs. While it is true that a few of their raw material costs have not advanced, the great majority of raw materials and packaging materials are certainly above prewar costs upon which a great many of the present selling prices are based. Labor costs within the industry have risen and most probably will rise further, and labor costs in the raw materials and packaging materials industries are in exactly the same position. Due to increases in costs which have already occurred, the profit margin now stands at a point at which further cost increases spell losses. Standard prices on nationally advertised items of this industry were things that never varied. As costs declined, it was the general practice of the industry to give more "free goods" to the distributors, or to promote sales through the use of combination deals to the consumer or through the use of premium articles. Then as costs advanced to make the profit margin normal at the advertised price, these methods were abandoned. At present cost levels there is no room for any of these merchandising stunts, and of course, under present conditions of heavy demand, they are not needed by established houses, but only by houses who are trying to gain a foothold or who are trying to improve sharply their relative positions in the industry. It seems that despite the length of time that prices of the products of this industry have been in effect, manufacturers will have to change their manner o thinking with regard to these levels of value.

How to advance prices is a question that is doubtless causing great concern to manufacturers. Should quantities be cut and the price per unit remain the same? Such a method would leave the actual prices just where they were before and eliminate a lot of merchandising difficulties, such as trying to educate consumers to pay a larger actual amount of money for the same item. Or should the bull be taken by the horns and the price increases be in the form of higher prices for the same package?

Abbott Salesmen Not in Union

THE Drug Trade Salesmen's Union CIO failed in its attempt to organize the salesmen of Abbott Laboratories in New York and Brooklyn. Upon petition of the Union, an election was conducted by the NLRB. The order of the board, dated August 28, dismissing the petition, stated:

"It appears from the Revised Tally of Ballots that no collective bargaining representative has been selected, since of the approximately 27 eligible voters, 26 cast valid votes, of which 13 were for the Union, and 13 against. No objections have been filed by any of the parties within the time provided therefor."

Tropical Medicine Research

THE American Foundation for Tropical Medicine will operate an Institute for Research in Tropical Medicine, construction of which in Liberia is assured through a gift of $250,000 from Harvey S. Firestone Jr., president of the Firestone Tire and Rubber Company, according to Dr. Thomas T. Mackie, president of the American Institute. Objectives of the new Institute, said Dr. Mackie, include a direct attack against the vicious circle of endemic medical problems in the tropics; development and improvement of local economies for the benefit both of local populations and local and foreign business enterprises; providing stimulus and facilities for educational institutions in the United States for research and teaching in this important field of medicine, and utilizing medicine to promote international understanding.

"The future importance of tropical areas throughout the world can hardly be under-estimated," Dr. Mackie said. "Both from the national and international viewpoints, strong and continued support for graduate education and research in tropical medicine is urgently needed, yet existing university funds are already too burdened to permit adequate developments in this field."

FDA Orders Penicillin Changes

THE Food and Drug Administration has ordered manufacturers of penicillin tablets to make these products with a minimum content of 50,000 units per tablet. The FDA has given manufacturers sixty days from the date of order to comply. Most manufacturers of penicillin tablets have been manufacturing them with a content of 25,000 units per tablets, so that this means doubling the potency of the tablets. Consequently, since usage in any given instance would be half as many tablets with the doubled potency, the number of tablets made and sold is expected to decrease, although the amount of penicillin used in a given case would not change. This is rather an unusual activity on the part of the FDA, but there it is, and manufacturers will undoubtedly comply even though it curtail the volume of sales by half from the point of view of the number of tablets sold, and to a lesser extent from the angle of dollar volume of the tablets sold. The doubling of the potency of the tablets will obviously increase the cost of the tablets.

The FDA has also amended regulations increasing the expiration date on tablets dental cone and oil and wax penicillin preparations from 9 to 18 months after certification by FDA. This action is taken as the result of laboratory tests which have established that penicillin in these forms retains effective potency for 18 months.

To prevent illegal over-the-counter sales, FDA is authorizing the withdrawal from packages of penicillin tablets of circulars expalining proper dosages. FDA had previously required that these circulars be included to help familiarize doctors with the proper use of the relatively new product. Now, however, medical advisors to the FDA feel that practitioners are sufficiently acquainted with the use of the drug to permit withdrawal of the circular. By withdrawing the circular, the FDA hopes to remove a temptation for laymen to purchase the drug for self-medication.

OPA Advisory Committee

A DRUG Industry Advisory Committee to cooperate with the OPA in any further control or decontrol of drugs and pharmaceutical preparations is being formed. The American Drug Manufacturers Association, the American Pharmaceutical Manufacturers Association, and the Proprietary Association were asked to submit names to the OPA for membership on this committee. OPA is also forming a Distributors Advisory Committee.

Testosterone and Sarsaparilla

AGING in the wood the fact that testosterone is present in sarsaparilla root and recalling our remarks in the September issue on that subject, we are moved to think further along the lines of a comparison with the Food and Drug Administration's attitude in declaring certain botanical drugs therapeutically worthless and of the A. M. A.—before the discovery of vitamins—declaring that cod liver oil had no value except the food value resulting from its fat content. Today, manufacturers of proprietary remedies are being urged to conduct research on the botanical drugs included in their formulas in an effort to disprove the FDA's rejection of these ingredients as of therapeutic value. Certainly prior to the discovery of vitamins, no amount of research could prove the true value of cod liver oil. Also prior to the discovery of the hormones, specifically testosterone, no amount of research could have proven this inherent value in sarsaparilla root. And it might be possible that similar conditions exist with respect to many botanicals that have been empirically used over the years in proprietary medicines. If proof of therapeutic value of some of these ingredients is demanded it might be forthcoming until another generation or two opens up an entirely new branch of therapeutics which will include things present in these botanicals. So even if the users of some of these botanicals undertake intensive research to prove the value of some of these botanicals, results might be negative for a long time to come. And when the discovery of their value is finally uncovered, these particular botanicals might be completely forgotten as remedial agents, as was the case with sarsaparilla.

A.P.M.A. Picks New Florida Spot

THE American Pharmaceutical Manufacturers Association has picked for its annual convention still another resort hotel not previously visited by any organization of this industry. Plans are under way to hold the 1947 meeting on April 28 to 30 at the Boca Raton Hotel, Boca Raton, Florida. A booklet from the hotel describes it as follows:

"The Boca Raton—a world within itself. A world where fun and play and gaiety exist side by side with the tranquillity of the tropics. A winter paradise where days are brilliant with warm sun and exotic flowers, the nights enchanting under the deep sky. Formerly the world's finest private club, the Boca Raton is now a resort hotel for you who appreciate the ultimate in gracious living. Sumptuous and smart, the atmosphere of luxury is constantly tempered by good taste—with the beauty of the hotel and all its unparalleled facilities rivaled only by the grandeur of nature which is so much a part of Boca Raton."

Streptomycin Report

THE widespread interest in streptomycin throughout the industry makes the report of Dr. Chester S. Keefer well worthy of report. In his report on 1,000 cases as chairman of the Committee on Chemotherapeutics and Other Agents, National Research Council, Dr. Keefer and his associates conclude:

"Streptomycin is a potent antibacterial agent that can be given intramuscularly or subcutaneously or injected directly into the subarachnoid space or the pleural or peritoneal cavity. Very little is absorbed from the gastrointestinal tract. The intramuscular route is the one of choice.

"Following intramuscular injection, streptomycin is excreted in the urine and bile. It is necessary to maintain a concentration of the drug in the blood and tissues that is at least four to eight times that required to inhibit the organisms in vitro. It is necessary to repeat the injections every three to four hours.

"The dosage of streptomycin depends on the type of infecting organism. It is desirable to deliver and maintain a sufficient amount of streptomycin at the site of the lesion so that the concentration is four to eight times that necessary to kill the organisms in vitro. One to 4 Gm. a day for five to fourteen days may be required in certain acute infections.

"In the treatment of empyema or meningitis it is advisable to use streptomycin totally by injecting it directly into the pleural cavity or the subarachnoid space.

"Streptomycin has been most effective in the treatment of tulamia, Hemophilus influenzae infections, urinary tract infections due to gram-negative bacilli.

"The results in typhoid, brucellosis and Salmonella infections have been disappointing and inconclusive.

"The results in experimental and clinical peritonitis are sufficiently impressive to warrant a much more extensive clinical study. The same can be said for pulmonary infections due to Friedlander's bacillus and other gram-negative bacilli.

"Further studies in tuberculosis are urgently needed as soon as adequate supplies become available.

"Untoward reactions are not infrequent and increase in frequency with increasing dosage. They consist of histamine-like reactions, headache, flushing of the skin, neurologic disturbances, vertigo and paresthesias, hypersensitive reactions, fever, skin eruptions and eosinophilia."

Surplus Drug Supplies

INTERESTING is the magnitude of the figures of surplus medical supplies such as 17,500,000 sulfanilamide tablets, and 12 million yards of dental floss. Others are 35,222 bottles of quinine, 40,849 bone chisels, 22,849 operative knives, and 29,995 puncture needles. These are only some of the 1,740 separate medical items listed recently in an Army medical depot in this country which contained 8,280 tons of medical supplies, with goods still flowing in at the rate of 200 tons a month. Stacked to the ceiling in boxes from Okinawa and Germany were 200 amputating saws, 315,584 bone screws, 268,047 pairs of surgeons' gloves and thousands of other varied items.

Sulfa Drug Patent Awards

SINCE they were the first to synthesize any pyrimidine derivative of sulfanilamide, Sharp & Dohme has been granted by the U. S. Patent Office a dominant position on all sulfapyrimidines, a group which includes sulfamerazine, sulfadiazine, and the lesser known (not generally used) sulfamethazine. However, another company was granted a specific claim on sulfadiazine since this company was the first to synthesize this particular derivative. However, Sharp & Dohme was granted additional specific claims on alkyl substituted sulfapyrimidines, such as sulfamerazine and sulfamethazine.

Synthesis of Amino Acids

SYNTHETIC amino acids are being made in increasing quantities at lower costs, according to a report to the American Chemical Society by Drs. C. M. Suter and S. Archer of the Sterling-Winthrop Research Institute. "Striking progress has been made in developing manufacturing methods for tryptophan, methionine and lysine, the first of which is in considerable demand for fortifying protein hydrolysates for clinical use," they said.

Indicating the source of these materials they reported, "The recently developed synthesis of tryptophan is of particular interest in showing the interrelationships which may develop in the manufacture of organic chemicals. One of the starting materials is indole which may be obtained from an intermediate in the synthesis of indigo, a common dyestuff. When indigo reacts with formalin and dimethylamine, it is converted into gramine, an alkaloid. This alkaloid gramine may then be condensed with a product obtained from ethyl malonate, and this ethyl malonateis also an intermediate in making many barbiturates which are widely used as sedatives. The product made from gramine is finally converted into trytophan by hydrolysis."

That synthesis of the amino acids will bring lower costs is indicated in the following statement, "From the progress that is being made it seems likely that the synthesis of amino acids will play an increasing important part in supplying these interesting compounds to the medical profession and to research workers. As the demand for them grows in volume, the usual gradual reduction in cost may be expected to occur just as it has with other important natural products such as the vitamins. Already this cost trend had become evident for the amino acids in most demand, methionine and tryptophan."

FTC and Laxative Claims

THE attitude of the Federal Trade Commission toward claims for laxatives is indicated by the following statements which a laxative manufacturer agreed to discontinue:

"That the preparation will have any effect on constipation except to the extent that it may provide temporary relief therefor; that its use will have any effect on symptoms such as fatigue, tiredness, gas, bloat or billiousness except to the extent that it may temporarily relieve such symptoms only when they are known to be due to constipation; that its use will eliminate waste through the liver or kidneys, facilitate natural elimination, tone the digestive tract, ..."

Penicillin Production

JUNE production of penicillin dropped to 2,170,-748 million units, but demand during July and August was not extremely active and makers have in some instances been able to accumulate stocks. The shortage which developed last winter is not expected to occur again since it is believed that the increase in production will bring sufficient supplies upon the market to meet coming requirements during the fall and winter months. The large plant now in operation in Great Britain is said to be creating some competition for American makers in the export market. Developments in world trade in penicillin are accordingly being closely watched.

Rosy Predictions

WE FAIL to see how predictions of greatly increased sales of cosmetics for the years that lie just ahead can be made on any sound basis. Late last month the National Wholesale Druggists Association was told that sales of toilet goods reached the huge total of $659,000,000 in 1945, and by 1948 should soar to between $750,000,000 and $800,-000,000. The association was also told that sales of men's lines accounted for $50,000,000 to $60,-000,000. An increase of the amount predicted in this instance would mean that within the next two years cosmetic sales are to advance from 14 to 21 per cent over an all-time high brought about by the greatest boom and the greatest shortage of goods that this country has ever experienced. We are not prophets of gloom, but neither are we Pollyannas. As other consumer goods become available in greater quantities during the coming years, at least part of the money that has been flowing into cosmetic purchases will flow in other directions. And if this industry does not get rid of the 20 per cent Federal retail tax, money will flow in directions other than cosmetics at a much more rapid rate.

There is no use in this industry painting a rosy future far beyond the realm of possibility. This only leads to trouble. Truly the industry appears to have reached new high ground and will not revert to prewar levels. The use of cosmetics has definitely and permanently broadened both as to scope of people using them as as to the scope of preparations now in use. But the industry will still rise and fall with the amount of disposable income in the country as it will rise and fall as competition from other industries sharpens due to a surplus of goods.

A. M. A. Public Relations

THE American Medical Association has engaged Raymond Rich Associates of New York as public relations counsel to act as spokesman for the Association in the release of information to the public. This job was formerly handled by Dr. Morris Fishbein, editor of the Journal of the A. M. A. and of Hygeia. The announcement in the J. A. M. A. said that the trustees of the Association had approved retention of the firm "as public relations counsel as well as the employment of a full time officer for this purpose in the headquarters office, with a budget adequate to the needs of the Association." All we have to say is that these people have to step pretty far and fast to beat Dr. Fishbein at handling the job of public relations or official spokesman for the Association.

The Crowded Conventions

THE conventions of the various trade associations of this industry have increased in size to the point at which they are becoming somewhat unwieldy, especially under today's crowded conditions of hotels throughout the country. Whether this expansion is due merely to the present boom in everything and to the fact that companies, under today's lush conditions, are willing to send more people to these meetings, is something that the future will reveal. However, it does seem that under the pressure of business as it exists today, and the difficulty of travelling merely for pleasure, more executives go to these meetings for a relaxation and a short break from the daily routine of the office. It is true that in prewar days the National Wholesale Druggists Association convention caused the large and beautiful Greenbrier Hotel at White Sulphur Springs to burst at the seams. But this year this same organization was scattered at some six or more hotels in Atlantic City—the only place with sufficient adjacent hotels to hold the crowd. Even the manufacturing associations in the industry have difficulty in finding resort hotels with sufficient room to hold the people who want to attend their meetings. For this reason they are often forced to travel great distances to beautiful but remote places. Let us hope that things in this direction will also soon get back to some sort of normalcy.

Fritzsche Celebrates 75 Years

FRITZSCHE Brothers climaxed the celebration of the seventy-fifth anniversary of the founding of the firm with a dinner-dance on September 21 at the Hotel New Yorker. This followed a week which all the representatives of the firm and their wives spent in New York with various short meetings for the men, and much entertainment for both the men and ladies. During the celebration it was announced that the company had contracted for a revised and greatly enlarged insurance and retirement plan effective October 1. It was also announced that Dr. Guenther now has ready for the publishers the first volume of the condensation of the results of his study and investigation of essential oils and raw materials to which he has devoted the best years of his life.

Ten Cent Size Back

WHETHER it's a sign of postwar recession, increased competition, reconversion, or something else, we don't know, but the ten cent size of Squibb's Dental Cream is back on the market, being reintroduced with a profit in gross lot purchases of 40.5 per cent.

Saccharin Market Tactics

THE drug manufacturers are desperate for saccharin and it is said they will do almost anything to get additional supplies with which to make tablets. A tale we heard about a black market operation in this product goes as follows. Material bought in this country was taken to the Mexican border and then carried over into Mexico to avoid the Mexican duty on the chemical. Then the material was offered from Mexico for import into this country at a fancy price. Saccharin enters this country duty free.

A New Trade-mark Law

THE new Lanham Trade-mark Act has finally been enacted and goes into effect next July, and it is predicted that litigation over trade-marks will be virtually eliminated in this field as a result of this new law. Under the Lanham Act manufacturers will be able to inspect records of all trade-marked drugs and cosmetics which will be registered under the act and on the basis of the survey a name can be chosen for a new product that is ready for the market without fear that a confusingly similar name is being used by another company. This will eliminate the expense, under present conditions, of withdrawing a product from the market until a new name is found, or while bringing suit in an attempt to obtain use of the name in question. This reduction in expenses will more than offset the cost of registering the concurrent trade-marks as called for in the new law.

Industry Future

THE fundamental character of this industry should assure everyone in it that the future of it is bright. Disregarding occasional variations as disposable income varies from year to year, the basic trend of the industry is bound to be steadily upward as far ahead as one can see. This does not mean that sales volume of the various branches of the industry will continue to rise above today's levels, but the volume will rise above what may be considered a more normal level and will not revert to prewar levels unless it be in period of real depression when all predictions go by the wayside. Drug products which are specific for various diseases are steadily increasing in number, and the present can truly be called the golden age of drug therapeutics. For this reason alone the drug and pharmaceutical branch of the industry is on new high ground. Another factor that places this branch of the industry on new high ground is the fact that only these new products must be manufactured and cannot be prepared by the pharmacist, as well as the fact that the items used for a long time are being manufactured for the pharmacist as to a steadily increasing extent as the retail pharmacist become more of a merchant than a compounder and as he realizes that it is much safer as well as easier to sell products uniformly compounded in the laboratories of the manufacturers.

In the cosmetic branch of the industry, manufacturers can rest assured that the use of the perfumes and cosmetics will always be greater than prewar except in a period of extreme depression. This is for the reason that the war spread greatly increased incomes throughout most of the population of this country and this increased income caused a much larger percentage of the women of the country to use and fully appreciate cosmetics. Also a very large number of women went to work for the first time during the war and these women felt the necessity of using cosmetics. Once they had used them and realized the better feeling of good grooming that cosmetics imparted to them, they continued to use them in very large measure. Also since the country apparently is permanently to be on a higher plane of production and employment, national income will be higher throughout coming years. And with an increased national income, an increased amount of money will be spent for cosmetics. Even if the same percentage of the national income is spent for cosmetics, the dollar volume of the industry will be higher. Then add to this the spread of the use of cosmetics by means of more users than before and also by means of the newer types of products that are constantly being developed, and we have a rather pleasing picture.

The industry will have its reversals and the times when competition will be keen. But there will continue to be a solid floor under the industry. Naturally when an industry grows, as this one has done and is continuing to do, the number of manufacturers in the industry can also be expected to grow. For this reason we shall continue to see in this industry as substantial factors some of the newer companies which were developed during the war and postwar boom period. Therefore, it is the problem of the older established manufacturers in the industry to maintain or improve their relative positions within the industry.

Patent Licensing

DR. THEODORE KLUMPP, Winthrop Chemical Company president, struck out against compulsory licensing of patents at the recent meeting of the American Chemical Society. Said Dr. Klumpp in part:

"Under our present patent system, the development of industrial invention has outstripped that of every other nation to such an extent that there really is no close competitor. Accordingly, before we adopt fundamental changes in the rules under which that system has operated so successfully, let us be certain of what we are doing.

". . . . every discovery in the pharmaceutical field has stimulated competitors to find something better. Compulsory licenses, however, would lay a dead hand on invention, for, instead of spending for research it will become cheaper to wait until someone else does the inventing and then apply for a license. Any form of compulsory licensing of patents, however plausibly it may be presented, is an attack on the integrity of property, and property of a kind which most deserves encouragement, the property that man creates out of his own thoughts, and research."

Dr. Klumpp suggested improvements in our patent laws, such as reduction of the time lag between a patent application and its issuance; compulsory licensing only when patents are unused; and raising the standards of patentability.

AMA Invites Manufacturers

UNPRECEDENTED action by the American Medical Association in extending to the industry an invitation to send representatives to the November 1 meeting of the Council on Pharmacy and Chemistry clearly indicates the trend toward even closer cooperation between the medical profession and the pharmaceutical manufacturing industry in this country. At this meeting there was planned discussion of the new rules of the Council, and since the industry was vitally interested in this subject, an opportunity was to be given to the industry to express its views, and the industry was to become better acquainted with the line of thought followed by the Council in formulating the rules.

RESISTING PRICE ADVANCES

Manufacturers, Wholesalers and Retailers Must Cooperate with One Another to Reduce Costs and Keep Prices at the Present Levels

IN THIS period of lack of labor and high costs for labor and practically all necessary materials, steps must be taken by manufacturers, wholesalers, and retailers of the products of this industry to cut costs in every possible way to avoid the unfortunate alternate of boosting prices all along the line. For if retailers do not curtail their operations and thus stop their costs from rising they will be forced to demand larger discounts, or they will not realize their usual profit margins. Likewise, the wholesalers, who also work on a strict percentage basis, must curtail their operations so that they will not suffer profit-wise on the discounts which they are now obtaining. And this same condition obtains for the manufacturer. If any one, two, or if all of these three groups increase their costs materially, the costs of drug and cosmetic items must go up. Price increases in the products of this industry might have to come, but they must be resisted in every way before such an unfortunate and fateful step is taken.

Wholesalers are faced with increased costs principally in transportation and delivery, cartoning and packaging, invoices and invoicing, and promotional activities. The problem of the right size of shipping carton in which the manufacturer should deliver his products to the wholesalers has been under consideration for some time. Many manufacturers have adjusted the size of these shipping cartons so that the wholesalers will have less breaking of cartons to do and thus wholesalers will be able to save money in this direction. How savings can be effected in the other directions is something to which wholesalers must give strict attention, and manufacturers should do everything that they can do to help the wholesalers solve these problems.

Drug manufacturers are faced with many more individual problems of costs than are the wholesalers. However, they will have to pay strict attention to shipping and transportation costs, returned goods, and many other costs which are quite remote from the fundamental problem of costs of raw materials and packaging materials, as well as manufacturing and packaging costs. Naturally manufacturer will be pressured for increased discounts which can only be given by advancing the prices and leaving the rate of the discounts at the same percentage figure for the simple reason that the manufacturers, with their increased costs, are in no position to take less for their products than when costs were lower.

The only bright side to the picture is that continued high volume, such as is being enjoyed today, will allow overall profit to be maintained at close to the same amount of dollars even though the percentage of profits is smaller than it was when costs were lower. For if the overall profit picture can be maintained in this period of high costs, it will not be necessary to advance prices. And while some might object to showing a smaller percentage of profit on an increased volume, it will be much better in the long run to ride through the present period in such a manner.

It is very easy to add up the increases in costs of materials, labor, and other things going directly into the manufacturing of products, or the various increases in costs of distributing and handling products and add this to the price. But such a way of solving the problem of increased costs is not going to help maintain the volume of the products which the industry sells and therefore is not for the best interests of the industry. After all, the way to maintain the industry in a healthy condition is to have the industry, if possible offer its products at prewar prices. If this cannot be accomplished completely, then costs should be held down as much as possible by increased efficiency in operations, and then prices should be increased by the absolute minimum amount necessary to maintain proper profit margins.

One good sign of the times is that E. R. Squibb & Sons have reintroduced their ten-cent size of Dental Cream with a profit of 40.5 per cent for the retailer when bought in gross lots. This is the sort of thing that will stabilize the prices in the industry and which indicates that the larger companies realize that this is no time to attempt to follow the lines of least resistance by advancing prices against present increased costs and future possibilities of still higher costs. These manufacturers, as well as forward-looking wholesalers and retailers, know that resistance to price increases is not only for the good of the country as a whole, but furthermore is good business. They know that it is to the benefit of their own companies and to the benefit of the industry as a whole that prices remain stable if this is at all possible.

The great majority of the drug and pharmaceutical manufacturers, as well as a good percentage of the cosmetic manufacturers are able to produce their goods more efficiently and therefore quite a bit more cheaply due to improvements in production and packaging methods introduced during the war years when labor wa short and at a premium. Plants were moderuized and much modern automatic machinery was introduced during this period as a necessity in keeping up civilian production and producing goods for the Armed Forces at a time when the war was draining our manpower resources. This should aid manufacturers in resisting price advances during the present period and until such a time this terrific boom period is over and costs and prices can be adjusted on a more normal basis.

But while manufacturers might be able to do their share in keeping prices at present levels, it is the wholesalers and retailers who must also work hard to "hold the line." And these people have not the margins with which to work. Manufacturers might be able to reduce their costs by eliminating "free goods" and many of the concession given to wholesalers and retailers, but, while such a step does not raise the price at which the products are sold to the public, it does raise the cost to the wholesaler and retailer and thus cut their possible margins of profit. The only saving grace for the distributors in such a step at the present time is that current volume might be great enough to allow them to continue to operate at a profit. However, the percentage of profits for wholesalers and retailers certainly cannot be lessened at a time when they are being squeezed by rising costs and stable discounts.

Therefore, we have in the set-up as it exists today, a condition that calls for the closest cooperation between manufacturers, wholesalers, and retailers, just as the depression of the thirties called for cooperation. At the bottom of the depression the situation was that cooperation was needed to keep wholesalers and retailers from going broke and thus to save their receivables of the retailers for the wholesalers, and thereby save the receivables of the wholesalers for the manufacturers. So today, with the industry definitely desiring to resist price increases, these three branches of the industry must cooperate so that the squeeze of higher costs will not affect any branch of the industry unduly.

Doubtless, if the twenty per cent Federal retail tax on cosmetics is eliminated, as it certainly should be shortly, there will be a tendency on the part of some cosmetic manufacturers to take the view that the customers have been accustomed to paying twenty per cent more for several years and that therefore that these people could and would pay more than the price less the tax for these same products. This is hardly the proper view to be taken if the cosmetic industry is to maintain its position and if it is to be allowed to expand as is generally predicted. The fact that people paid a twenty per cent tax does not mean that they would pay higher prices for the same products once the tax is removed. One of the main reasons why cosmetic sales have been so high during the recent period, is the fact that other goods have not been generally available and for this reason money for gifts flowed freely into cosmetics as gifts. Once other products are readily available, a comparison between cosmetics and the products of other industries will be made and if cosmetics are then taxed, or if with the tax removed, prices are advanced to near where they were with the tax included, cosmetic sales are going to suffer materially. Furthermore, the present boom conditions are not going to last forever, and when they disappear, these increased prices would cause this industry to feel the effects of recession to a greater extent than need be.

Its up to all manufacturers and distributors of the products of this industry resist with all their resources any tendency to increase prices and to reduce them wherever possible. And reductions that are being made due to declining costs of some of the newer raw materials which are being priced lower as their use is expanded are the bright spots in today's rapidly changing picture. Manufacturers, by and large, can be expected to bend all their efforts toward keeping down their own costs and in aiding wholesalers and retailers to keep down theirs. Let us hope that cooperative effort among the three branches of the industry will bear fruit in the period to come.

ART *in* *Advertising*

PAINTED BY MARGIT VARGA

IN THE preface to the recently published work "Portrait of America," the well-known author and Americana authority, Bernard De Voto, underscored a trend in advertising that is of considerable interest. Said Mr. De Voto: "The advertising business has been steadily displacing the photographer with the illustrator and the illustrator with the easel artist . . . there has come to be not the art of advertising but a kind of advertising that utilizes art . . ."

PAINTED BY MIRON SOKOLE

In the field of pharmaceutical advertising, Abbott, Upjohn and Schering are outstanding examples of companies who have come to appreciate the important place that art has in advertising to the physician and public.

Abbott very early in World War II appreciated the importance of the skilled artist in recording on the spot developments in war medicine. This company commissioned a number of topflight artists to cover Army and Navy medicine. The results were published in full color in Abbott's excellent magazine, "What's New." Traveling art exhibits skillfully publicized were arranged. The great American public was soon making its way to see the works of art and raise their voices in enthusiastic acclaim.

Upjohn approached the use of art in advertising in a different way. Instead of having the paintings made to order, they conducted a search for the best ready prepared U. S. easel paintings. In working out their campaign the Upjohn Company prepared a list of what they considered to be the most important current health problems. Then they proceeded to search the artists' studios, museums and galleries for the best American easel paintings that would help to dramatize each subject. Layouts were then worked out, and a copy approach developed. Reports have indicated that they purchased some fourteen canvasses and hope to add more. Traveling exhibits are also being arranged

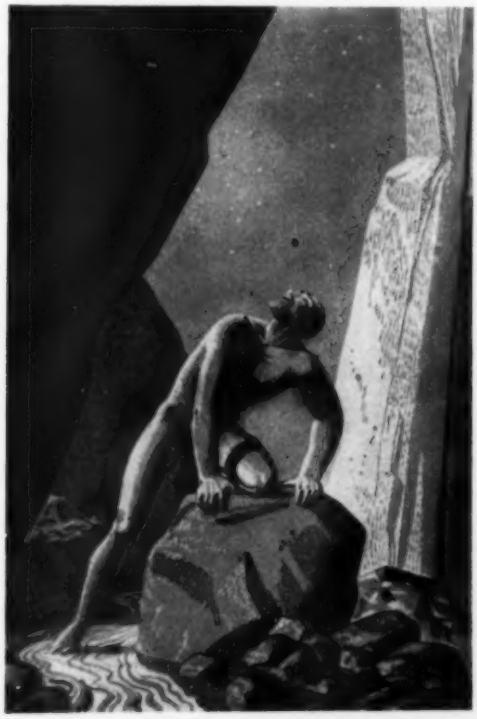
for. The Upjohn Company announced that eventually all of the paintings will be placed on public exhibition as a permanent collection of contemporary American art. Life Magazine recently reviewed Upjohn's contribution toward making their series of great American canvases available to the general public through the medium of widely read publications.

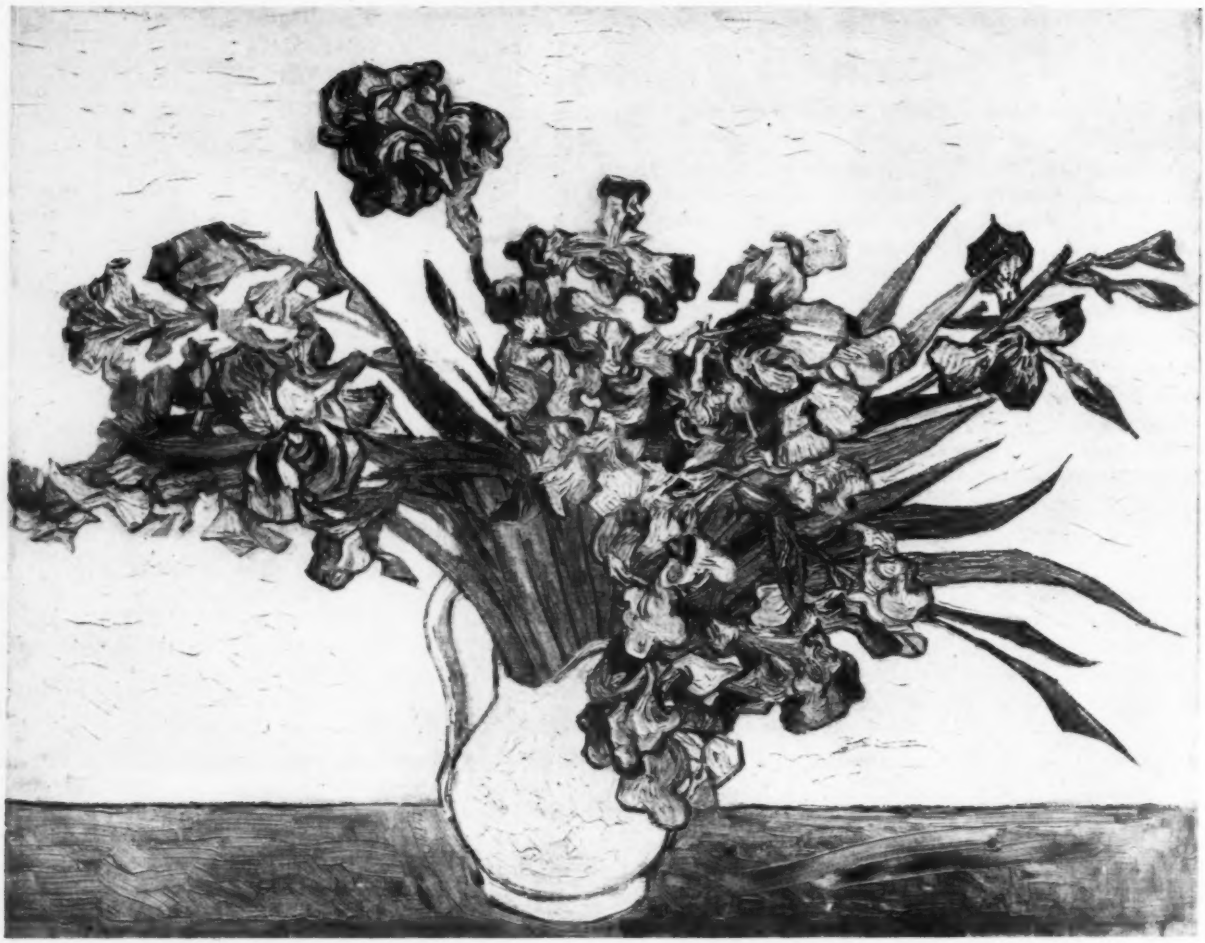
The Schering Corporation commissioned the distinguished artist, Rockwell Kent, to do a series designed to express the mental symptoms related to various diseases. With the sensitive hand and emotion of the artist, Mr. Kent turned out a series which has

created much comment among the members of the medical profession. So many doctors requested copies of Mr. Kent's work that Schering decided to print a limited edition of the series suitable for framing. The response to the offer was a clear and irrefutable answer to the question "Does the doctor read pharmaceutical advertising?" Of course he does, but a lot depends on what you have to say and how you say it. Schering found the key that unlocked the door of greater response.

We don't think Mr. De Voto was too far-fetched when he said: "Millionaires will never be our Medicis again: corporations have taken over their function."

Two of the American paintings used by Upjohn in its advertising are shown on the opposite page, while on this page are three of those which Rockwell Kent was commissioned to paint especially for The Schering Corporation.





"Purple Iris" by Vincent Van Gogh, lent by Dr. and Mrs. David M. Levy to the exhibition of paintings from New York Private Collections at the Museum of Modern Art.

ORRIS ROOT
Its Oil and Its Resinoid

By DR. Y. R. NAVES*

IT WAS in 1842 that Adrianno Piazzessi created, near the Village of San Polo, in the heart of Tuscany, the first plantations of *Iris Pallida Lmk.* Twenty years later, the rhizome production was being sold regularly on foreign markets. San Polo has to this day remained one of the principal centers of production, others of importance being Greve and Figline. The cultivation is extended in the high Valley of Arno, to Florence on the East, and to Sienne on the North, to the flanks of the rocky hills abounding in cypress and chestnut trees, at altitudes ranging from 300 to 500 meters. Surrounded by the horizons which once were seen by the eyes of St. Dominic and St. Francis, on the trembling earths which still inspire the artists and the poets of Quattrocento, there awaken each Springtime the first flowers of the orris, white with pale blue veins.

*L. Givaudan & Cie., S. A. Geneva Switzerland.

Near Verona, *Iris florentina* and *Iris germanica* are cultivated. Their rhizomes are utilized for toilet powders and for the flavoring of wines. For perfumery, the products of *Iris pallida* are preferred, and it is this plant that is cultivated in France, in the Maritime Alps and the Var, on a rather small scale.

In 1855, the Tuscan production reached 165 tons of dried rhizomes; in 1900, 1,700 tons, and in 1914 a high of 2,100 tons, only to fall to 300 to 400 tons in 1939. French production never surpassed 50 to 60 tons.

The orris of Morocco, India and China is *Iris germanica*. It is cultivated in the high valleys of the Grand Atlas and exported through Mogador. It is peeled but not cleaned; and is sold without removal of the foliaceous collet. Frequently, it is infected with the larvae of insects. In China, the orris is exported through Che Foo and Chin Kiang.

The rhizome is horizontal, often branched, and has an aerial stem 60 centimeters high, surrounded at its base by a rosette of long lance-shaped leaves. It is usually harvested during the third year following plantation and therefore contains three strumae or swellings. In the early summer, from June to August, during the dry season, the root is removed from the earth. The third struma is divided under the collet and the roots taken off. The rhizome is then washed in running water. One hectare furnishes 8 to 12 tons of the fresh product.

The rhizomes that are to be sold without peeling are cut in three parts vertically, washed and dried in the sun for 6 to 7 days. In this way, the rhizomes that are uprooted late are dried, for after 4 to 5 years of vegetation they become too hard to be easily peeled.

The cleansed rhizomes are also washed in running water for 12 to 14 hours and dried either in the open air for 30 to 40 days, or in an oven. The operation is costly; one woman cleans 40 to 50 kilograms of rhizomes per day; 100 kilograms of fresh rhizomes yield 25 to 35 kilograms of prepared rhizomes.

Sometimes the rhizomes are bleached with sulfuric dioxide; particularly those to be used for candy for children with poor teeth. This practice, however, lowers the value of the rhizomes for perfumery.

Fresh orris rhizomes have an herbaceous odor suggestive of the potato. The fine odor of the violet develops slowly; a lapse of time of several years, a minimum of two to three, is necessary for the full blossoming of this odor. During this maturing period, the rhizomes must be protected from insects and preserved from microorganisms. They are often attached by the larvae of a coleoptera which I have identified as being *Sitodrepa panicea* L. (Anobiidae), a species very fond of amylaceous material. Van Lingelsheim has noted among the most frequently encountered microorganisms the following: *Trichoderma lignorum* and *Penicillum crustaceum*.

An attempt has been made to explain the development of the odorous constituents, particularly irone, by the action of diastases on the heterosidic components. Flückiger and Tschirch have emphasized that treatment inactivating diastasic action seems to inhibit the liberation of irone, whereas the action of mineral acid solutions reestablishes it.

From that point the course of fermentation or hydrolitic action has been predicted, with the aim of perfecting the liberation of this ketone and thus augmenting the yield of the rhizomes in odorous products. I will return a little later to this question.

I have been able to establish the presence of irone in the central cylinder and its periphery by the legal reaction with sodium nitroprussate, which gives a blue color. This experiment shows that it is wise to clean the rhizomes in wide chips, without any fear of a loss of irone. In fact, the treatment of uncleaned rhizomes yields only a fraction of the odorous products other than irone.

Before any treatment, the orris should be ground into fine hard parts, and this is a delicate matter. For this purpose, a grinder having attached pounding hammers, and turning with great speed, is used.

The orris perfume is extracted either by steam distillation or by volatile solvent treatment. These processes are delicate and require considerable experience. Only rarely are the uncleaned rhizomes used; they still contain constituents having a strong and bitter odor, and they give colored and hard resinoids. Their products are hardly suitable except for the perfuming of soap and for certain food products.

Vogel, who in 1815 used alcohol and ether for the extraction of the odorous principles of orris, thought he had obtained a fatty oil. Sixty years later, Flückiger used carbon disulfide and obtained a very odorous brown resin. But it was only at the end of the last century that resinoids appeared among the raw materials for perfumery.

For volatile solvent extraction, acetone and alcohol are seldom used. They give hard products, difficult to handle. Benzene and petroleum ether are preferable, the latter yielding concentrated products, of soft consistency and very highly odorous.

From the resinoid there are prepared:

1. The so-called "soluble" or "absolute" resinoids, made up of the fractions soluble in alcohol.

2. The concrete oils, prepared by steam distillation. These oils can be compared to those (orris concrete or orris butter) obtained by direct submission of the ground orris to the action of steam.

These concrete oils, whatever the process for obtaining them may be, contain a large proportion of the higher fatty acids. In view of the various uses, in the perfumery of extracts and aromatics in general, these acids are eliminated, and the neutral product obtained is called "orris oil absolute" or sometimes it is called by the name of the principal constituent, "irone absolute."

The following are various analytical statistics on these products:

	Resinoids		
	Benzene	*Petroleum Ether*	*Distillation*
% Yields	2.1 to 3.5	1.15 to 2.0	0.20 to 0.4
Average Yields	2.4 to 3.3	1.6 to 1.9	0.20 to 0.24
Acid Value	30 to 50	31 to 60	—

(Continued on page 586)

To most people, atomic power implies an awesome instrument of death and destruction. Yet scientists know that the controlled use of atomic energy can also be a most potent weapon in the conquest of disease and an invaluable aid in the expansion of knowledge. Nucleonics, the term research workers prefer to use when referring to the study of atomic energy and related subjects,[1] has already begun to point the way to a better and healthier world.

Indeed, it has been said[2] that the use of artificial radioactive isotopes for "tracer" and atom tagging experiments in chemistry, physics, biochemistry and medicine may be even more world-shaking than the atomic bomb itself. As a matter of fact, artificial radioactivity, a product of atom-smashing, has proved to be a most important tool for the scientific investigator.[3] For more than a decade, radioactive materials have been used to investigate metabolic processes, to trace the action of various drugs, and, more recently, to diagnose and treat certain diseases. The importance of this progress is aptly indicated in the observation made by Evans[4] that "through medical advances alone, atomic energy has already saved more lives than were snuffed out at Hiroshima and Nagasaki."

It was about fifty years ago, in 1896, that Becquerel discovered the radioactivity of uranium. As remarked by Chamberlain,[5] this appears to have been the initial exploration in the field of atomic energy. Two years later, the Curies had discovered radium. As a result of injuries to Bequerel and other workers, the dangers inherent in atomic energy became evident quite early. However, evidence soon accumulated to show that the controlled rays from radium could be used beneficially in the treatment of cancer and a number of other diseases. Thus the earliest applications of atomic energy were in the field of treatment.

Some time later, in 1934, the Curie-Joliots discovered artificial radioactivity. The cyclotron, developed by Lawrence, was soon engaged in the production of radioactive isotopes of a great many of the chemical elements. Biologists, of course, were quick to see the importance of these radioactive isotopes as "tracers" for the study of vital metabolic processes.

In addition to the cyclotron, other types of equipment, like the Van de Graff generator and the betatron were developed, by which electrons, neutrons and various atomic nuclei could be hurled with great energy at other atoms. By means of such apparatus it was found that many atomic nuclei, when changed from one element to that of another or, when internally altered without changing to another element, became radioactive and, like naturally radioactive elements, gave off one or more of the three alpha, beta, or gamma radiations. These became known as artificial radioactive elements and, before the war they were produced most abundantly by the cyclotron. Though available only in small quantities, these radioactive materials had begun to be used for medical research and therapy.[6]

In 1939 a new type of reaction was observed. It was

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found that if uranium was bombarded with neutrons, some of the atoms split apart into two completely different atoms of about equal weight, but that the combined weight of the two new atoms did not equal that of the original uranium atom. This phenomenon is called nuclear fission. When it occurs, some mass is lost with the release of enormous amounts of energy, in accord with Einstein's formula.[6] It was this discovery that led to intensified studies of chain reactions and the basic concepts of the release of atomic energy. As is now well known the two processes complement each other; thus a chain reaction may be described as a series of self-sustaining or multiplying nuclear fissions.[7]

This knowledge formed the basis for the building of atomic "piles" and the development of the atomic bomb. Thus was ushered in the Age of Atomic Power. To some, this Age is synonomous with the uncontrolled, destructive energy of the atomic bomb. Others, the scientists and engineers, look to the controlled reaction units or piles as the great hope of mankind.

ATOMIC ENERGY IN MEDICINE

By M. A. LESSER

The first atomic pile was put into operation at the University of Chicago on December 2, 1942—perhaps one of the most significant dates in world history. Other piles have been put into operation since then. They are made by piling uranium metal, uranium oxide and graphite in a definite way. As remarked by Curtis,[8] a chain-reacting pile may be described as a nuclear boiler in which many new elements are formed, most of which are radioactive. In addition to these radioactive elements formed as a direct result of fissions, it is possible to place various elements inside a chain-reacting pile and perform various nuclear reactions which yield other very valuable and important radioactive isotopes.

The production of tracer and therapeutic radioisotopes has been heralded as one of the great peacetime contributions of the uranium chain-reacting pile. Because this use of the pile will unquestionably be rich in scientific, medical, and technological applications, an announcement from the headquarters of the Manhattan (Atomic) Project is of great significance. This announcement, made in the June 14, 1946 issue of *Science*, stated that radioactive isotopes would be made available, under certain specified conditions, to qualified research organizations. Under this program, about 100 radioactive isotopes will be obtainable in various quantities.

It was stressed, however, that because the war-built piles had other objectives, a considerable amount of readjustment would be necessary before the supply of radioisotopes could meet the demand. For example, most of the radioisotopes in greatest demand, such as carbon 14, sulfur 35, and phosphorus 32, must be produced by the irradiation of materials foreign to the pile; existing piles not having been designed for this purpose.

At this point it should be explained that the numbers following the name of the element refer to the mass of the isotope; e.g. to the total of protons plus neutrons in the nucleus. Ordinarily stable carbon consists of isotopes of mass 12 and 13, sulfur of 32, 33, and 34, and phosphorus of 31.[9]

The announcement from the Manhattan Project also emphasized that a uranium chain-reacting pile cannot make the extensive variety of radioisotopes producible with the cyclotron, because the cyclotron makes use of a much greater diversity in energy and type of nuclear bombarding projectiles. The chain-reacting pile works by slow neutron bombardment and can produce isotopes by only two processes, fission and gamma ray radiation, but the yield of material from the pile is considerably greater than that obtainable from the more versatile cyclotron.

A most important phase of research in connection with atomic energy has been the development of methods for safeguarding workers from the great hazards associated with the production and use of radioactive materials. Having learned many valuable lessons from the early history of X-rays and radium, teams of scientists devised systems that resulted in a most remarkable record of freedom from ill effects to personnel in this particularly hazardous field.[10,11] As a by-product of their studies, the investigators assembled considerable invaluable data on the action of radioactive substances and their raw materials.[5,8] Nonetheless, as stressed by Hahn and Sheppard,[12] one cannot overlook the fact that radiation of any kind is a dangerous tool in inexperienced hands.

Probably the most important consideration in the use of these new tools in biological and medical research

is the fact that the atoms of a radioactive isotope are chemically indistinguishable from the atoms of its normal stable isotope. Likewise, when either normal or radioactive isotopes are given to any animal or human being, the effect is identical, unless the dose is large enough to produce damage because of its radioactivity. The importance of this complete chemical identity is quite obvious. Each radioactive atom, however, on disintegrating, emits either beta or gamma rays, or both, and these may be detected in various ways. Thus, any substance can be "tagged" by mixing with stable atoms a very small number of radioactive ones, and in this way the passage of the substance through the body can be traced by means of instruments like the Geiger counter, electroscopes, and others.[13]

As remarked by Cantril,[14] in his discussion on the use of radioactive tracers in industrial medicine, the value of the method lies in the ease with which the tagged or tracer isotope can be distinguished in studying the physiologic process at any point in the metabolic pattern. Chamberlain[5] notes that the methods of detecting and measuring the radioactivity of these isotopes are so sensitive that only very minute amounts of the isotope is needed. In the case of iodine, for example, only 0.0000001 Gm. of the isotope is ample for the trace technic. This is important from another aspect, for it means that the total dose of isotope is well below the level of danger from radioactivity. By such means, it has become possible to study and follow various physiological processes in plants and animals, to determine the distribution and excretion of drugs, and to make other informative investigations without the necessity of removing tissues or organs for chemical analysis.

Of the several hundred radioactive isotopes that have been identified and studied, relatively few are suitable for use as tracers in biological or medical investigations or as therapeutic agents. Many isotopes are foreign to the organism, while others form compounds that are too toxic for use. Another basic consideration is that some isotopes disintegrate too rapidly to be of any value insofar as radioactivity is concerned. In other words, their "half-life" is too short. The term half-life is used in comparing the decay rates of different elements, and refers to the length of time during which the radioactivity of a substance decreases to half its original value.[7] While excellent work has been done using isotopes with a half-life of several hours, an isotope with a half-life of minutes or seconds finds only rare utility in biological investigations.[5] From the therapeutic aspects, the half-life of a radioactive element must be considered in order that radiation be not prolonged beyond the desired time and yet be sufficiently long for its mission to be accomplished.[12]

The pattern of investigation and application of this new tool of science has been indicated by work already done and studies now being carried on.[3, 15] In viewing the possibilities, even ordinarily conservative people become enthusiastic. Chamberlain,[5] for example, feels that it would be difficult to over-emphasize the advantages to biology and medicine resulting from the use of tracer technics. A few months ago, Stone[6] said that, "a new age has begun for medicine. Large quantities of many radioactive elements will soon be available as tracers for metabolic processes, as diagnostic aids for clinical investigations and as therapeutic agents for treatment of disease."

The entire field of physiology and biochemistry is being re-examined with the aid of radioactive tracers. In many cases the results already obtained are contrary to previously accepted viewpoints and the new findings point the way to further modifications.[4] Radioactive phosphorus, carbon, sodium, iodine, iron, calcium, sulfur and several other elements have already been used with success in determining the mechanism of many complex steps in metabolism. They have thrown considerable light on how single atoms are exchanged in living materials for other atoms, even in such apparently permanent structures as teeth and bones.

Perhaps the most widely studied element by the new technic is phosphorus, which plays an essential role in the metabolism of all cells, both plant and animal. Readily prepared in the cyclotron by the bombardment of ordinary phosphorus (P31), radioactive phosphorus (P32) is considered a convenient element with which to work. In studies of its distribution, a single do e of disodium phosphate tagged with radiophosphorus has been found to accumulate to the greatest extent in the bones, next in the muscle, and so on in decreasing order in liver, stomach and small intestines, blood, kidneys, heart, and least of all in the brain.[2] The element tends to become concentrated wherever growth and new cell formation are most active. This, therefore, has given it important implications for cancer research and therapy.[5]

It has been said[6] that the use of radioactive carbon, particularly carbon 14, in studies of plant and animal metabolism offers the greatest possibilities of advance in the understanding of life processes. The use of very short-lived carbon isotopes has already radically changed the knowledge of photosynthesis. The first samples of carbon 14 prepared for private use in the uranium pile at Oak Ridge has been ear-marked for such diverse problems as a comparison of sugar and lactic acid metabolism in normal and diabetic animals, a study of the mechanism of photosynthesis, tracing the deposition of carbon compounds in bones and in teeth, and tagging of facts to study their utilization by various organs.[16]

Radioactive iodine, one of the first tracer elements to be used by research workers,[17, 18, 19] has yie'ded considerable valuable data, especially with regard to the functioning of the thyroid gland. Radioactive sodium has been used very effectively in studies of circulation time and circulatory efficiency, the nature and rate of ion transfer between fetal and maternal circulations, and in many other investigations of a similar nature. Particularly useful in studying the function of the

(*Continued on page 572*)

ROBERT WOOD JOHNSON

He Believes in Small Business

ONE of the most interesting and controversial figures in the drug industry today is Robert Wood Johnson, Board Chairman of Johnson & Johnson. His writings and speeches stumping for small business makes him a man well worth knowing.

Robert Wood Johnson was born in New Brunswick, New Jersey 53 years ago. He received his early education at the Lawrenceville School. His father died when he was only fifteen so after graduating from Rutgers Preparatory School in 1910, young Johnson went into the family owned firm. In eight years, he worked up to be a Vice-president and then Vice-president and General Manager. In 1932 he was made President, a position he held for six years. Johnson then resigned to become Board Chairman, a job he still holds.

Robert Wood Johnson is a wiry, genial, gray-eyed man who likes hard work. He has a vast storehouse of energy that is constantly urging him to do new things. Johnson has traveled extensively, raced his own yacht from New York to Spain, explored near the Arctic and flown his own planes, one of them Autogyro. Johnson also finds time to dabble in small town politics which he says has taught him much about people. He recalls with a chuckle one experience he had while Mayor of Highland Park, New Jersey.

"One night while I was mayor I was having a formal dinner party with about twenty guests. We were all at the table eating when I was called to the telephone. It was a citizen—a woman—calling; and she said I was the worst mayor the town ever had, that the government wasn't any good, that the sooner I got out of office the better, and so forth. I asked her what the trouble was, and she said, 'I put my garbage out three days ago, and it hasn't been collected.' I asked her name and address and told her I'd attend to it right away.

"So—still in my dinner clothes—I went out and got in the station wagon, drove to her house and asked if she was the lady who'd called about the garbage. She said she was. I asked her where I'd find it. She pointed it out to me. So I picked up the can, put it in the station wagon and drove to the dump and dumped it."

Johnson did not bother to add whether this outburst of attention changed the woman's opinion of the Highland Park Mayor.

Robert Wood Johnson, the business man, is both shrewd and farsighted. He has long been convinced of the importance of the small business man. He takes great pains to emphasize how he feels about small business when he relates the experience he had during the depression with a J & J product that was not progressing very rapidly. He consulted with all his advisers regarding the product but got nowhere. Johnson then decided to call in all the executives who were concerned with the product. In marched some twenty-seven. After taking a quick look, he exclaimed, "All right, gentlemen. You may leave now. I see what the trouble is!" Johnson realized that the organization was top-heavy and chockfull of duplication. By degrees he brought about a reorganization. Today Johnson & Johnson is made up of a number of small divisions, each held responsible for a few closely related products.

As might be expected, when World War II came, Johnson placed himself at the service of his country. He was first appointed Ration Administrator for New Jersey. He then resigned to become a Colonel in the Army Ordnance Department. Johnson was later promoted to Brigadier General. He served the Army until 1943 when he was appointed Chairman of the Small War Plants Corporation.

His appointment created much comment within Congress. Although the then Senator Harry Truman, viewed Johnson as just another big business man who was intent on continuing the control of government contracts by large corporations, he later changed his view and supported the General. Senator Murray of Montana described the J & J boss as "a very able man and

(*Continued on page 588*)

Jungle Operating Room, painted by Howard Baer for the Abbott Collection of Paintings of Army Medicine.

Trends in Modern Medicinals

PART II

By MADELINE O. HOLLAND, D.Sc.*

Anticonvulsant

Various drugs have been used through the years in the treatment of epilepsy. Some have been fairly successful, others of very little value. Abbott Laboratories have recently introduced a new drug under the name of Tridione. Chemically, this drug is 3,5,5 trimethyloxyazolidine 2,4 dione. This acts as an anticonvulsant in petit mal, myoclonic and akinetic seizures of epilepsy. It also acts as an analgesic. It is available in capsules or the capsules may be emptied and the powder mixed with milk or water for children. The elixir which contains 300 mgm. per fluid ounce is also employed. For injection purposes there is supplied a solution with 0.75 Gm. of urethane and 9.5 per cent of alcohol. This may be administered intravenously, intramuscularly or subcutaneously. A few side effects such as dermatitis

*Managing Editor, *American Professional Pharmacist*; Technical Editor, *El Farmaceutico*; and Consultant.

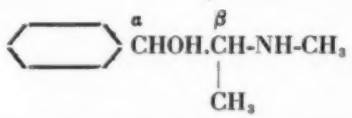
have been noticed with this drug. The main side effect in adults has been photophobia, that is, a sensitivity of the eyes to bright daylight.

Fatigue

Fatigue is a rather usual condition experienced by most people in these hectic times. When a person is suffering from fatigue he secretes excessively large quantities of hormones produced by the adrenal gland. These hormones known as steroids are essential to life and similar chemically to the sex hormones. These steroids are subsequently excreted in the urine as 17-ketosteroids. There is a definite relationship, therefore, between the output of these 17-ketosteroids and fatigue. A synthetic compound has recently been developed which, when given orally, appears to be absorbed and transformed in the body into a variety of hormonally active steroid substances. It is nontoxic and in 50 mgm. doses is said to increase efficiency and lessen fatigue without noticeable harm. The individual taking this drug feels just as fresh at the end of the day as he would at the beginning. However, it does not take effect until after the third day. It also requires competitive activity. In other words if the individual has no incentive the compound will not have any effect. This compound is known as Δ_5 pregnenelone and is being studied for future release by Schering.

Sympathomimetic Drugs

A sympathomimetic drug is described as one which produces a rise of arterial blood pressure, dilatation of the pupil and contraction of the plain muscle of the orbit, flow of saliva and tears, and inhibition of the tone and rhythm of muscular walls of mammalian intestine. A number of such drugs have been developed and used in the past. They include such drugs as ephedrine and amphetamine. Natural ephedrine (*l*-ephedrine) is a laevo rotatory base in alcohol solution and has the formula:



It has two centers of asymmetry as designated by the carbon atoms marked α and β above. There also occurs naturally in certain other species of Ephedra a stereoisomeride of ephedrine known as *l*-pseudo-ephedrine (*l* φ ephedrine). This substance differs from true ephedrine only in the spatial arrangements of the substituent groups on the asymmetric carbons. Where the spatial arrangement of the substituent groups of both α and β carbons are reversed the corresponding enantimorph (mirror image) results, known as *d*-ephedrine and *d* φ ephedrine respectively.

In the case of desoxyephedrine or deoxyephedrine, as it is sometimes called, the absence of oxygen in the structure results in only one center of asymmetry and thus there are the *d*-desoxyephedrine and its mirror image *l*-desoxyephedrine and the racemic mixture *dl*-desoxyephedrine. Desoxyephedrine was first prepared by Ogata in 1919 as *d*-desoxyephedrine hydrochloride which he called *d*-phenyl-isopropylmethylamine hydrochloride. Emde some years later, by the catalytic reduction of *d*-pseudo ephedrine, obtained *l*-desoxyephedrine and thus proved the structure of the ephedrine molecule.

A number of synonyms or proprietary names for the desoxyephedrines have been employed. Thus as other chemical names we have phenylisopropylmethylamine, N-methyl phenylisopropylamine, N-methyl amphetamine, N-methyl benzedrine and methylisomyn. These These names can be understood from the chemical structures below wherein amphetamine is seen to be a lower homologue of desoxyephedrine differing from it only by CH_2 in total chemical constitution.

ephedrine
$C_6H_5CHOH\ CH\ (CH_3)\ NH\ (CH_3)$

desoxyephedrine
$C_6H_5CH_2CH(CH_3)NH(CH_3)$

amphetamine
$C_6H_5CH_2CH(CH_3)\ NH_2$

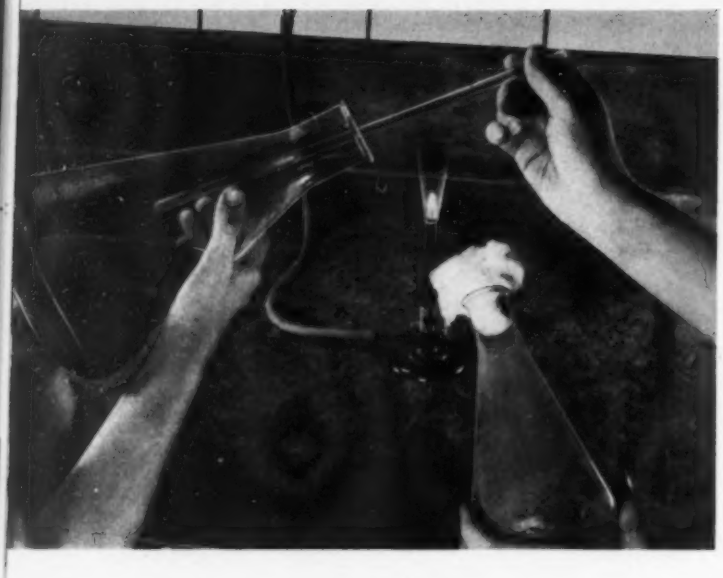
The dextro-rotatory form of desoxyephedrine is sold in Germany as "Pervitin" and in the United States and England as "Methedrine." The racemic form is available in the United States as "Oxydrene." Dexedrine, marketed by Smith, Kline and French Laboratories, is dextro amphetamine (benzedrine).

Desoxyephedrine is used in the symptomatic treatment of depressive mental states. It elevates the mood and counteracts sleepiness and fatigue. However, its effect decreases due to an accumulated need for rest. It has been recommended for use for railroad engineers, the personnel of motorized units, persons taking long automobile drives, night watchmen and the like. Where emergency conditions warrant its use, it can be used as a mental stimulant.

It is also quite useful in elevating the mood of persons who are in a depressed state following an operation or in those suffering from chronic disease or inoperable tumor. It is also employed in conditions for which amphetamine sulfate has been used such as narcolepsy, postencephalitic Parkinson's syndrome, chronic alcoholism, migraine and hay fever.

The most effective doses of this drug range between 2 and 6 mgm. If the dose is on the higher side there may be side reactions. Its effect is experienced in ten to twenty minutes after oral administration. Desoxyephedrine also possesses a vasoconstrictor action when applied topically. When used alone on the nasal mucosa a concentration of 1 per cent or more is necessary. It has been shown by Turnbull and his colleagues that a combination of desoxyephedrine and sodium sulfathiazole results in a synergism which in turn causes a greater degree of vasoconstriction. It is believed that a new compound known as desoxyephedronium sulfathiazole is formed. A number of proprietary preparations are now marketed combining 2.5 per cent of so-

(Continued on page 576)



Penicillin Dosage Forms

A Survey of Trends

PENICILLIN PRODUCTION PICTURES COURTESY HEYDEN CHEMICAL CORP.

SINCE the release of penicillin for general civilian use, there have developed four popular dosage forms: parenteral, tablet, troche and topical. Until about one year ago, the manufacture of only the parenteral form was permitted. Last year manufacture of the other three forms was allowed. Since penicillin is of such major importance to the drug field, DRUG & COSMETIC INDUSTRY thought it worthwhile to find out from a cross-section of over 300 busy prescription pharmacies the prescribing trends in penicillin dosage forms.

Question 1—Which is the fastest moving form?

The parenteral is still the penicillin dosage form of choice. It is well to remember, however, that the parenteral method was well entrenched while the tablets, troches and topical forms have been available only since last fall. The survey indicates a growing use of the tablet in place of or supplementary to the parenteral form. As one druggist put it, "The overall picture in terms of volume is the parenteral product. Doctors and hospitals still show preference for this dosage form. The tendency has been to use stronger doses such as 200,000 to 500,000 units, and our sale of the 200,000 unit is more than the 100,000 unit."

The troches seem to have gained a ready acceptance with the dentist in particular. They have found that those penicillin troche products which have taste-appeal are those which they prescribe most frequently.

Penicillin ointments (topical and opthalmic) have a use but do not seem to have been accepted by the medical profession with the rapidity and whole-heartedness that has been the case with the other forms.

Question 2—Has the price reduction of penicillin tablets influenced physicians to increase their use of this penicillin dosage form over the parenteral?

Almost two-thirds of the druggists surveyed were of the opinion that the price reduction had influenced physicians to increase their use of the tablet over the parenteral form. There was no doubt, however, that the parenteral was still the form of choice. Since it is admitted that it requires four to five times as much oral penicillin as the parenteral to get a similar therapeutic response, it is understandable that the price of medication is bound to be an influencing factor. It should be recognized, however, that oral medication is more convenient and has greater patient acceptance. It will be interesting to watch developments in the struggle between parenteral and tablet form medication.

Approximately two-thirds of the druggists we checked state that physicians do not specify penicillin tablets by trade name. The usual practice is to permit the pharmacist to use his own discretion in the brand he dispenses. This practice of course encourages selling the product having the best price. More recently at least two of the pharmaceutical houses have put on penicillin tablet trade name campaigns to encourage the physician to specify.

Penicillin marketing is going through an interesting period of evolution. With the advent of new and single penicillin factors (S. G. F. etc.) it is a good bet that specification will be promoted to the hilt.

United-Rexall Presents

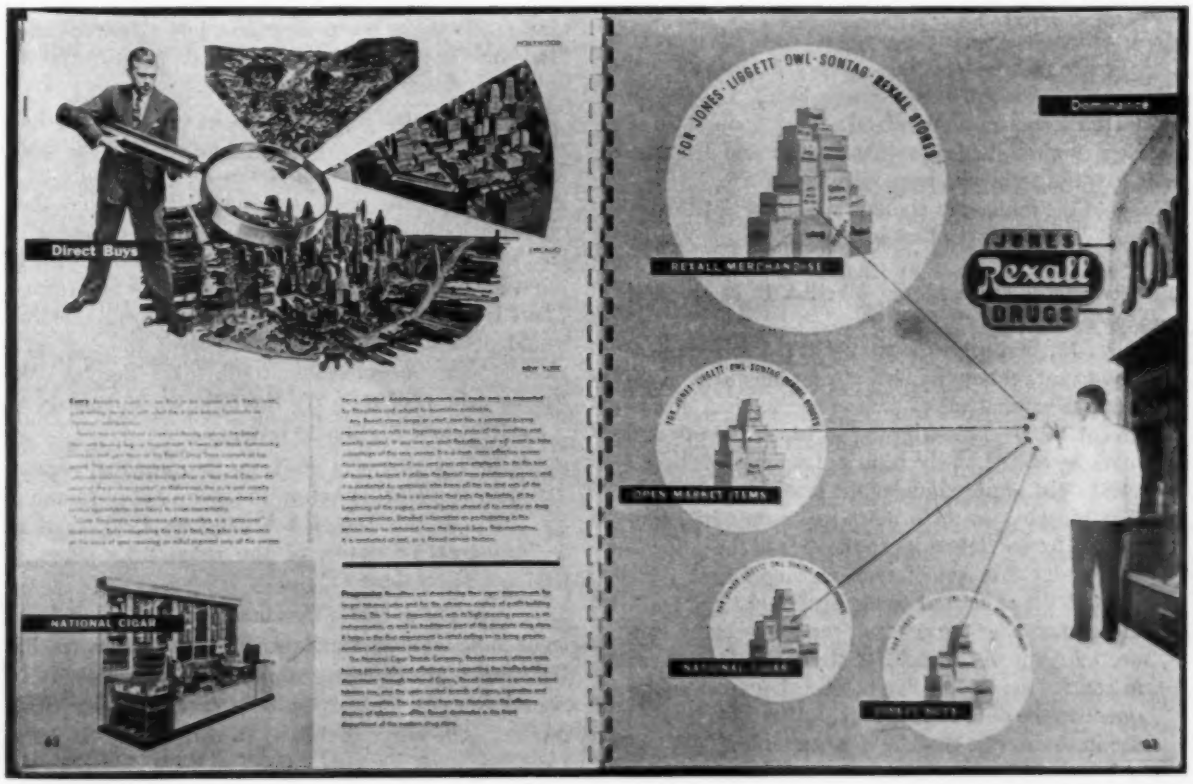
A New Opportunity for the Independent Druggist

SINCE his coming with United Drug in 1941, Justin Dart has done much to attract the attention of the drug industry. He reorganized United Drug's numerous semi-autonomous subsidiaries. Then Dart turned down Montgomery Ward's $150,000 a year presidency for the smaller ($75,000 a year) salaried but more challenging United Drug job. Just recently Dart came into the news again with the announcement of his new (Opportunity Unlimited) plan for the 10,000 independent Rexall stores.

As is generally known in the drug trade the Rexall agents were a loosely woven group of independents who had the exclusive right to promote the Rexall line. It was also recognized that there was a need for a cohesive force to give stability and life to the organization. From the beginning Dart has taken a fatherly interest in the Rexall agent—United's former stepchild. The young United-Rexall president has not viewed the 10,000 Rexallites with just altruistic interest. He has learned that chains just cannot work their way into some communities especially the smaller ones. The Rexall agent is the answer to that enigma.

The Rexallite is an independent and has the advantage of first hand contact with the customer. He can be just as much a neighborhood father-confessor as the non-Rexallite. It occurred to Dart and his assistants that if they could make Rexall independent operate more efficiently, the future of United and their 10,000 retail friends would be very bright indeed.

(*Continued on page 584*)



A NEW TRADE MARK LAW

By HUGO MOCK*

THERE is no industry whose functioning and prosperity is more inter-related with trade marks than the toilet goods industry and no member of the toilet goods industry will remain unaffected in some way by the provisions of the Lanham Act.

The importance of this new law to U. S. trade mark owners generally can scarcely be overemphasized as it is the first general legislation concerning trade marks (largely repealing or effecting all present trade mark statutes) since the Act of February 20, 1905. It is intended to supersede generally all existing trade mark laws with due reservations for present property rights connected with trade marks.

After a brief general discussion of some of the important phases of the law, there will be added a summary of specific steps which should be taken by all trade mark owners in cooperation with their trade mark counsel with special reference to the problems of the toilet goods industry.

The writer wishes to acknowledge herein his especial obligation to members of the Lawyers' Advisory Committee of the United States Trade Mark Association and to the members of the Trade Mark committee of the New York Patent Law Association and to other trade mark experts who have been consulted.

Some of the important changes which are features of the new Trade Mark Law compared with existing statutes:

1. Incontestable Trade Marks—Section 15 of the new law provides:

> "Sec. 15. Except on a ground for which application to cancel may be filed at any time under subsections (c) and (d) of section 14 of this Act, and except to the extent, if any, to which the use of a mark registered on the principal register infringes a valid right acquired under the law of any State or Territory by use of a mark or trade name continuing from a date prior to the date of the publication under this Act of such registered mark, the right of the registrant to use such registered mark in commerce for the goods or services on or in connection with which such registered mark has been in continuous use for five consecutive years subsequent to the date of such registration and is still in use in commerce, shall be incontestable:"

It should be noted that this incontestability provision can in no case be availed of before July 5, 1952, and applies only to marks registered under the new law or to marks registered under the Act of March 3, 1881, or the Act of February 20, 1905, where same have been republished according to the directions in the new Act.

Furthermore, the word "incontestable" must not be taken too literally as there are certain exceptions noted in the Act itself which limit the plea of incontestability. It is thought, however, that this feature of the law will prove of value to trade mark owners after July 5, 1952, in many cases as limiting the legal remedies available to defendants in cases involving the so-called "incontestable" marks.

This "incontestable" feature should have the following advantages.

In litigation involving an "incontestable" mark, many of the technical defenses now available to a defendant would probably not be considered by the courts, such defenses as that the mark in question was geographical or descriptive could scarcely be urged in the case of an incontestable mark. This section should largely in litigated cases remove the necessity on the part of the plaintiff of proving secondary meaning and give all "incontestable" marks the status of strict technical marks under our present law, just as the so-called "ten year marks were considered as technical marks under the Act of February 20, 1905.

The incontestability is subject to certain exceptions which may be classified into three groups: a trade mark is not incontestable (1) if it has lost its nature as a trade mark or has been abandoned, (2) if it has been obtained by illegal means or is used in violation of a law, i. e. the anti-trust law, (3) if registration or use of the trade mark is violating principles of law and equity. There is nothing extraordinary in these exceptions that would detract from the importance of the new provisions. The incontestable trade mark becomes the strongest form of property rights in trade marks.

Furthermore, Section 22 provides:

> "Registration of a mark on the principal register provided by this Act or under the Act of March 3, 1881, or the Act of February 20, 1905, shall be constructive notice of the registrant's claim of ownership thereof."

2. Concurrent Marks—This is a new feature in U. S. trade mark legislation and provides in certain cases that the same mark or substantially similar marks may be registered in the United States Patent Office by separate owners. The effect of this is to embody in the trade mark law itself a status which has heretofore been the

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subject of judicial decree in a number of cases. Section 2, paragraph (d) of the Act provides:

> "(d) Consists of or comprises a mark which so resembles a mark registered in the Patent Office or a mark or trade name previously used in the United States by another and not abandoned, as to be likely, when applied to the goods of the applicant, to cause confusion or mistake or to deceive purchasers: PROVIDED, That the Commissioner may register as concurrent registrations the same or similar marks to more than one registrant when they have become entitled to use such marks as a result of their concurrent lawful use thereof in commerce prior to any of the filing dates of the applications involved and the Commissioner or a court on appeal determines that confusion or mistake or deceit of purchasers is not likely to result from the continued use of said marks under conditions and limitations as to the mode or place of use or the goods in connection with which such registrations may be granted which conditions and limitations shall be prescribed in the grant of the concurrent registrations thereof, and concurrent registrations may be similarly granted by the Commissioner with such conditions and limitations when a court has finally determined that more than one person is entitled to use the same or similar marks in commerce. The Commissioner shall give not less than thirty days' written notice to all applicants, registrants, and users specified by any of the parties concerned of any application for concurrent registration and of the time and place of the hearings thereon. When the Commissioner decides to grant a concurrent registration the proposed registration shall be published in the Official Gazette of the Patent Office and the application shall be subject to opposition as hereinafter provided for other applications to register marks. Concurrent registrations may be ordered by a court in an action under the provisions of section 4915, Revised Statutes, under such conditions and limitations as the court considers proper in accordance herewith."

In the opinion of the writer, the registration of concurrent marks might be allowed with limitations as to place or with limitations as to the goods. For example, under the Act and Patent Office or a court might decree that WHITE EAGLE bread could be registered by one baking concern to be limited for use in Pacific Coast states and another concern might register and use WHITE EAGLE bread in the rest of the United States.

In another example, a mark used on nail polish by one concern might be concurrently registered and used by another concern for hair tonic throughout the United States if the Commissioner or a court concluded that confusion or mistake or deceit of purchasers was not likely to result from such concurrent use.

3. Classification of Trade Marks—The new law brings the classification of marks into closer conformity with many judicial decrees and litigated cases in this field by not deciding the question of registration purely on the question of classification as is the present practice. Section 30 of the Act provides:

> "Sec. 30. The Commissioner shall establish a classification of goods and services, for convenience of Patent Office administration, but not to limit or extend the applicant's rights. The applicant may register his mark in one application for any or all of the goods or services included in one class, upon or in connection with which he is actually using the mark. The Commissioner may issue a single certificate for one mark registered in a plurality of classes upon payment of a fee equaling the sum of the fees for each registration in each class."

Therefore, in many cases the opposer will not be bound purely by the classification, but if he can show damages or possible confusion will be entitled to prevail regardless of such classification.

The present test in the Patent Office of possible confusion depends on the question whether the respective goods are goods of the same descriptive properties and this is largely determined by a somewhat arbitrary Patent Office classification. For instance, in the present classification, soaps and hair tonics belong in different classes while hair tonics and hydrofluoric acid are in the same class. Similarly, clothing is in class 39 whereas fabrics from which clothing is made are in a different class, and this has resulted in a mass of litigation both in and out of the Patent Office. It is apparent for instance that there is a much greater difference from a trade mark standpoint between infants' shoes and ladies' hats (both in the same class) than between a woolen fabric and a suit made of the same fabric (now in different classes).

The new act by not limiting or extending the applicants' rights purely on a classification basis is an improvement over present procedure.

4. Unregistered Marks—One of the distinct disadvantages of existing trade mark statutes is that registration provided merely procedural advantages and the test of ownership in all cases was priority of usage of a mark and not registration. This resulted, especially in the toilet goods industry in some concerns deliberately not registering their marks which they used in a small way and when in good faith, the same or a similar mark was adopted and began to be nationally advertised these "ambush" marks would be used for the purpose of making claims against the innocent infringer who would in many cases have to settle upon the terms of the concern having priority of use.

It is indeed true that the common law as to trade marks has not been repealed by the new statutes and the right to register is still determined by priority of usage. However, the remedies available to the non-registrant who has priority of usage have been in many cases sharply curtailed and in this respect the new law will bring relief to many trade mark owners even though not to the extent originally hoped for in some of the drafts of the new Act.

(*Continued on page 527*)

"Like having an Extra Watch Dog"

THAT'S how many users feel about Delta Pine Oil Disinfectant. In dozens of ways, all around the home, it protects against the unseen threat of germs. Laundry, kitchen and bath . . . even Rover's kennel enjoys new germ-free cleanliness after an application of this efficient preparation.

A product of the Delta Chemical Laboratory, New Orleans, La., Delta Pine Oil Disinfectant is safely sealed by Crown Screw Caps. Only Crown Screw Caps have the patented Deep Hook Thread. It grips under the glass thread of the container and gives greater sealing pressure with any given amount of application force. Crown Cork & Seal Company, Baltimore 3, Md. *World's Largest Makers of Metal Closures.*

CROWN CLOSURES

Packaging and Selling

Exploding Some Myths

One of the most charming qualities of the cosmetic industry is its willingness, even its eagerness, to swallow its own myths.

Take the over-glamorized field of men's toiletries as one example. Probably no other group of products in the whole history of the cosmetic field from the time of Cleopatra until now has received an equal degree of a free and lively press, more excitement and speeches within the industry, and it should be added more misinformation.

The number one fallacy of our men's toiletries is that it is something new in the industry within the last 6 to 8 years, and that the present volume of this business which is also usually exaggerated and misrepresented, is a tremendous new growth that should excite and fascinate everyone.

The use of men's toiletries goes back to the dim ages in the cosmetic industry; commercially in this country they were well established over 40 years ago, represented by a number of well known brands. The very first issue of Beauty Fashion, then called Toilet Requisites, thirty-six years ago gives the first lead article to a discussion of the growth and promise of expansion of men's toiletries.

Since then men's lines including shaving preparations, after-shaving lotion, cologne, talcum powder, the products that comprise 85 per cent of the business in men's toiletries, have been well established in almost every drug store. The industry seems to have forgotten such names as Mennen, Williams, Colgate, and others who had been treading this particular cosmetic path for very many years before the glamor of this new idea burst upon the trade.

What really happened is the discovery of the gift package in men's toiletries, bringing the field of men's preparations to the woman, not to the man. Even the gift package was not new because some of these stand-bys for many years provided the drug store with a gift set which usually sold for $1.00 or under. But these were not the glamorized higher priced gift packages which appealed primarily to the department store and which caused this burst of extravagant publicity and in turn brought more than 200 new lines into this branch of the cosmetic industry during the last five years.

This was a major contribution of these new lines, that is a gift package that would appeal to women. It unquestionably expanded business of the cosmetic industry, firstly because it offered a new gift which would compete in a women's choice with the time-honored necktie or other products in the limited field available as gifts for men.

The other thing it did was to open the big broad field in the department store as a new form of distribution for men's toiletries, stores which have a greater capacity to create more sales than the drug stores and a group of stores which unquestionably would back up this product and, through it, create new business for the industry.

These lines have progressively widened their interest among men, but it should be noted, as a very definite fact, that in the purchase of these class products 70 per cent are still bought by women. Basically this 70 per cent purchase of the gift package by women is the new addition to the industry derived from the men's field in the last 8 or 9 years. This amounted in dollars and cents at manufacturer's prices to not more than 12 million dollars. If we wish to add the volume of dollars added to the industry by the number of new men who have formed the habit of regularly using toilet preparations, disregarding the fact that there was a normal increase anyway, we may add another five million dollars at manufacturer's prices.

Sportsman, Jr. is a new line of specially packaged toiletries designed to please the young men. Introduced by John Hudson Moore, Inc., the line consists of after shave lotion, cologne, talc, shaving cream and hair dressing packaged in square crystal bottles decorated with baseball, football, skiing and basket ball scenes.

Nearly every magazine and newspaper, employing an advertising salesman to call on the cosmetic industry has produced a survey of this field. Their estimates of the total volume of business runs from 25 million to 50 million dollars annually, nor are they particular to state whether this is manufacturer's prices or retail prices.

The one dominant characteristic that may be observed in each of these surveys, is a plain unwillingness to underestimate the market.

We ought not to be too far astray if we accept the opinion of the leading manufacturers in this particular field.

Few of them are willing to estimate this branch of the industry as exceeding 25 million dollars at manufacturer's prices. This makes in our arithmetic 5 per cent of the cosmetic industry. This, of course, is a very harsh appraisal of many of our eminent magazines who have seemed recently to take the attitude that the balance of the cosmetic industry was rapidly becoming an appendage to men's toiletries. We fully appreciate that the 20 or 30 new advertising accounts available is something to treat with reverent attention and enthusiasm.

Little Boy Blues

It looks like a first aid station will have to be set up to take care of the casualties that are sure to be incurred in the fight shaping up between the "cosmetics for little boys" on one side and the "down with cosmetics for little boys" on the other side. Lines of demarcation are drawn up and allies have already been marshaled, represented by Helene Pessl, noted cosmetologist and her chief of staff Alma Archer, beauty editor for the N. Y. Daily Mirror as

champions of, "bubble baths for boys" and columnist Robert C. Ruark for the N. Y. World-Telegram, who holds that youngsters should follow the time hallowed tradition of little boys and go around smelling of "dead frogs, ingrained earth and billy goats."

It is just about here that we should step out and let these titans slug it out, because as a bystander we would only wind up taking a beating from both sides, as is always the case.

Mr. Ruark, in his essay for the protection of little boys from well meaning if "lotion happy" mothers, held it is the time honored fact that lads should be allowed to get as dirty as they want, but should never be subjected to the indignity, in his eyes, of taking a bubble bath or scrubbing with a scented soap. Boys will continue to get dirty for many years to come, but comes Saturday night and a thorough scrubbing, they might as well enjoy a bath with a pine scented soap and the novelty of a bubble bath as long as they get clean in the process. As for using anything stronger, he has a very good point, because there is nothing more certain to bring down the ire and abuse of the gang, than to sprinkle junior with a toilet water and turn him loose unarmed among his playmates.

The following is a copy of a letter sent to Robert C. Ruark, by Mme. Helene Pessl, replying to Mr. Ruark's attack on her "young lad" products in his column.

"Your 'backward-o-backward-turn-time-in-your-flight' tinged article about my YOUNG LAD TOILETRIES in your World-Telegram column of August 7th has just been called to my attention.

"Were boys really like that twenty years ago, Mr. Ruark? Or has time cloaked your memory with a composite picture, one-fifth reality, and four-fifths Peck's Bad Boy, and Huck Finn? Have you forgotten that even Alger's little urchins who grew up to be bank presidents washed behind the ears?

"If your picture of the little man of 1926 is fact and not nostalgic fancy, then twenty years have changed things a lot. Junior, circa 1946 is far from a little Fauntleroy, but people have so generally accepted Pasteur's dictum on bad little bacteria that cleanliness is no longer a stigma in the bubble gum and spit ball set.

"Hidden in your polemic is a shining grain of deep truth, Mr. Ruark. You are right. There are more exciting things in the very young man's life than taking a bath. But if Johnny looks forward to the novelty of a YOUNG LAD BUBBLE PINE OIL BATH, instead of having to be 'forcibly subdued' into making contact with the bath tub, don't you think it makes for pleasanter feelings all around? And isn't the little fellow less likely to become a psychoneurotic in later life if he is spared such unnecessary childhood traumas? By chasing the bogeyman out of the bathtub we help to develop a happier child into a better integrated adult. Think, too, of the time and energy saved, which his parents can spend in worthwhile pursuits . . . . like reading your column and enjoying your sharp and articulate wit.

"That Johnny is cow-lick conscious is beyond dispute. Through the years fathers have found their bottles of hair lotion mysteriously missing from the bathroom shelf, with only a strong fragrance pervading the bathroom air and fragments of glass lurking where parents' bare feet unerringly find them. So it's a wise parent who would save his temper and his pedal extremities by giving Junior a bottle of YOUNG LAD HAIR LOTION . . . . in a practically slip-proof bottle. Even you admit to moments of weakness in your youth . . . . but bear grease is rather hard to come

The Cosmetic Trend

Discussing the possible effect of the recent lifting of ceilings on cosmetics, buyers generally let it be known that they have not been bothered very much by price regulations throughout the war at any rate and do not expect that the ending of price restrictions will make much difference in the price structure. Cosmetic counters generally have not suffered from the inequalities that price ceilings have brought to many other store departments and, as a matter of fact, cosmetic prices have been surprisingly steady.

Proof, if it should be wanted, is produced by the very thorough cost and price study which is part of the Annual Report to the Controllers' Congress of the N.R.D.G.A. The size of the average sales ticket of the cosmetic counters of the studied department stores and specialty stores was $1.38 in Spring 1943 and had risen to $1.57 by Fall. It dropped during Spring 1945 to $1.45 (the Spring averages are habitually lower because of the absence of the high priced gift business of the Christmas season) but rose to $1.71 during the second part of the year. Only the average for the whole year is stated for 1945 but the $1.64 of last years' ticket is only 6 cents higher than the average for 1944. In other words, the total rise in the size of the cosmetic sales ticket from 1943 to 1945 does not amount to much more than 26 cents from Spring 1943 to the middle of last year. Almost all of this increase is accounted for by the predilection of customers of picking the more costly article and making more than one purchase at the cosmetic counters on one sales ticket.

Admittedly, it is not always easy to discover, how much this tendency of buying more and buying better has contributed to the average price rise of the assortment upon the counters. However, it is interesting to note that, while cosmetic sales rose 14 per cent at an average in 1944 and 8 per cent during 1945 in the department stores and specialty stores covered by the analysis, sales per square foot of selling space remained identical for the two years at $153. This makes it probable that the rise in the size of the sales ticket has been less due to higher prices and more to a rise of the number of purchases by any one customer.

Buyers are inclined to take a rather favorable view of this disclosure. The customer buying more units is generally a more promising prospect for the future than the one who spends more on each item. The advantage of the higher cost sale is easily lost when income declines while the habit of buying a greater variety of articles persists longer.

This does not mean that buyers believe widely that prices will remain frozen, now that the shackles have been removed. Some adjustments are expected. However, as they will concern largely items in the lower price levels which are generally not handled by the better type department store and druggist, the effect of any possible change in the price structure of this type of merchandise upon the typical department store assortment is not likely to be severe, if it will be noticed at all.

Gift ware is generally excluded from this appraisal of price developments, because of the more sensitive cost factors that enter into the production of cosmetic gift assemblies.

a timely DOW specialty

C·64

. . . TO WEAVE RICH PATTERNS IN FRAGRANCE !

Dow presents to the perfumer an attractive new specialty, C-64 . . . ready to add a note of opulence to many formulations for perfumes, soaps, cosmetics. C-64 possesses a powerful, spicy odor with a slightly minty touch, somewhat suggestive of patchouli oil. Blenders will find it extremely valuable for all types of oriental perfumes. It is also excellently adapted to the preparation of colognes and for inclusion in soaps and cosmetics.

A very stable, crystalline material, C-64 blends well with citrus oils and dissolves in alcohol, even when diluted. In purity and uniformity, it conforms to Dow's traditionally high standards. Write to us on your company letterhead for working sample and full details.

DOW AROMATIC PRODUCTS: *Coumarin, Cyclotene, Diphenyl Oxide, Diphenyl Methane, Gardanthral, Indol, Methyl Anthranilate, Methyl Phenyl Carbinyl Acetate, Methyl Salicylate, Palatone, Phenyl Ethyl Acetate, Phenyl Ethyl Alcohol, Styrene P-100, Sylvenol, and others—*

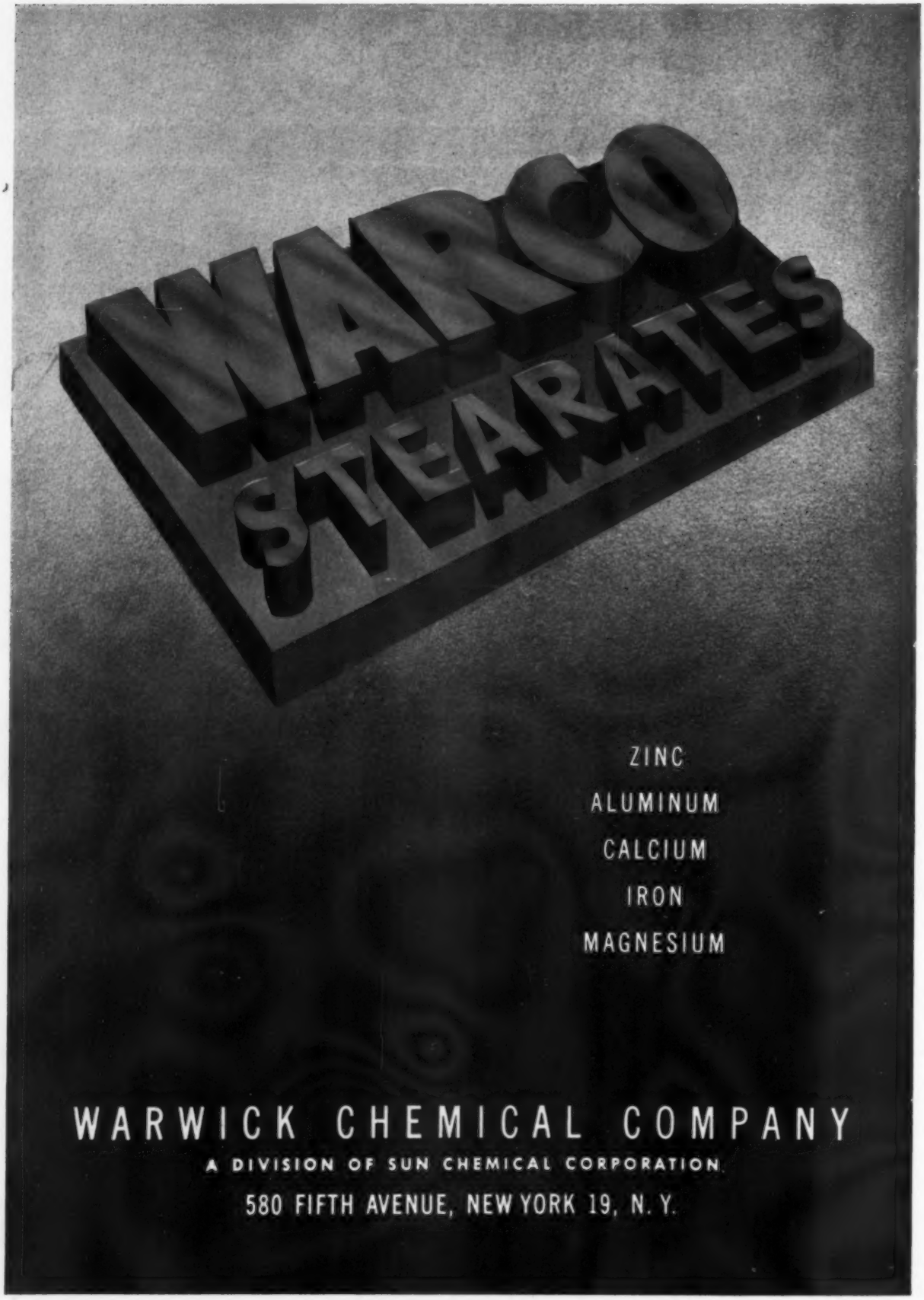
THE DOW CHEMICAL COMPANY, MIDLAND, MICHIGAN

New York • Boston • Philadelphia • Washington • Cleveland • Detroit • Chicago • St. Louis
Houston • San Francisco • Los Angeles • Seattle

Synthetic
AROMATIC
Chemicals

DOW

CHEMICALS
INDISPENSABLE TO INDUSTRY


WARCO
STEARATES
ZINC
ALUMINUM
CALCIUM
IRON
MAGNESIUM
WARWICK CHEMICAL COMPANY
A DIVISION OF SUN CHEMICAL CORPORATION
580 FIFTH AVENUE, NEW YORK 19, N. Y.

by these days, the folks at the zoo, for instance, being terribly fussy about having their bears pot-shot at.

"And now we come to fragrance. Frankly, Mr. Ruark what is wrong with the odor of pine? Isn't it a he-man characteristic to long for the clean fresh smell of a pine forest? As for lemon verbena, have you ever really smelled it (It's so faint it takes a sharp proboscis to find it out). Lemon verbena has won a respectable place in the lives of adult males for generations, because it is unobstrusive, pleasant and clean smelling. It's rather unnecessarily stoic, it seems to me, to stick to yellow bar soap, in this sybaritic day and age.

"As for the psychological value of YOUNG LAD TOILETRIES . . . . think hard again Mr. Ruark. What games intrigue the child aged two to ten? Games that mimic grown up activities, of course. A small red piece of tin on wheels is really a racing, clanging fire engine, with Junior the fire chief. Children like to play at being grown up, and making a grown up affair of his bath and hair combing and tooth-brushing with his own toiletries is right up his day dream alley. And things of his own give him a feeling of security and possession . . . . a little like a safe deposit box full of bonds or a mortgage-free farm would give to you or me.

"Making toiletries especially adapted to the needs of the child is not a fad, but sound good sense. Personal hygiene, has I humbly believe, come to stay. So why not make it attractive to the young?

"I've merely tried to put spice and novelty into Junior's very important job of keeping tidy, but don't fear for him, Mr. Ruark, he can run as fast, swat a ball as hard, and climb a tree as agilely as ever your little boy of long ago. Besides, his use of YOUNG LAD TOILETRIES, if the growing purchases are any gauge, is shared by half the boys in his class who brush their teeth, slick down their cowlicks and bathe with happy frequency, Junior is not alone.

"In conclusion, Mr. Ruark, I can't resist asking whatever gave you the notion that my YOUNG LAD line was designed to recoup failing post-war fortunes. The only hand writing on the wall for our adult cosmetics so far, is a happy upcurve in the little line on our office sales chart. Now that the boys have come marching home, milady is assiduously seeing to it that her ex-G.I. finds her as good to look at, as his foxhole dreams. The war-time morale-building was just a warm-up. She's keeping us busier than ever, these days."

See It With Plastics

Manufacturers have long recognized the fact that racks or containers which plainly display the package or its contents move merchandise more readily than almost any other display medium.

Canadian like American manufacturers, are returning to normal in use of transparent packaging that protects the product from unnecessary handling and allows the customer to see what he is buying.

These individual "show cases," are fabricated by the American Paper Box Co., Ltd. of Canada. Completely sanitary, factory sterilized and sealed, items in Lumarith containers reach the user in new condition. There is no guesswork on the part of the consumer when he sees the brand name and price on the display counter, and because it is transparent, none of the advertising value on the actual package is lost.

Bad Taste vs Good on Radio

For some time the radio audience has been subjected to commercials ranging from spot announcements to fifteen minute, or even longer programs, of companies selling their wares. For all the merits of these various products the patience of the listener has been sorely tried. A poll conducted by Womens Day among its readers voted "LS/-MFT" as the most hated commercial, and "Herbert Tareyton is back" as the runner up. But the soap and pharmaceutical people came in for a lot of none-too-complimentary remarks as regards the jingles they use to push their sales. Among the most unpopular contenders in the contest were Ivory Soap, Super Suds, Rinso and Lifebouy.

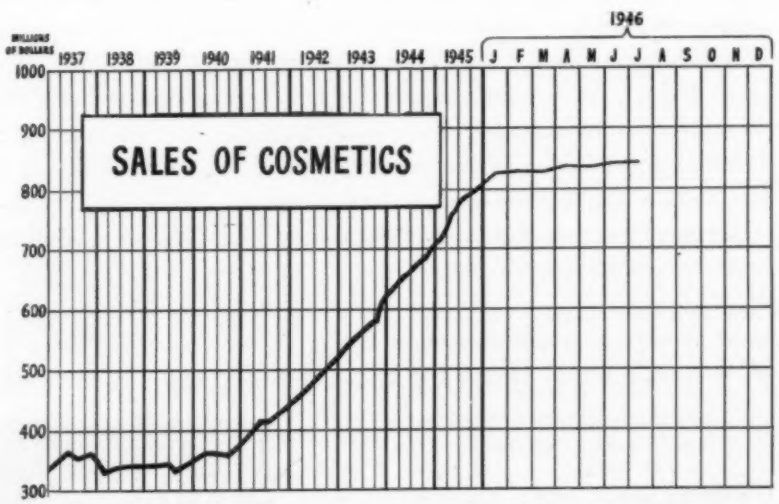
In contrast to the poor taste exhibited by this type of promotion, the programs put on by Matchabelli with its "Stradivari Quartet" and the symphonic half hour over WQXR by Parfum's Weil, show that good taste is appreciated by radio audiences and commercials can be tied in without making the listener want to hang the announcer up by the heels.

Revlon-Columbia Record's Unique Tie-Up

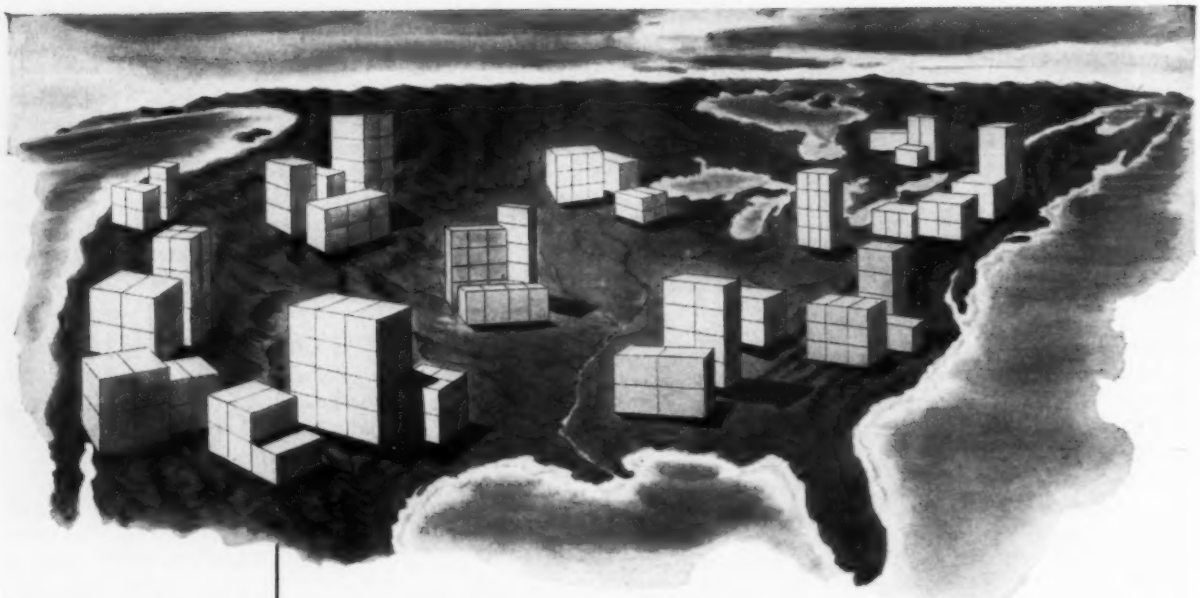
The unusual and elaborate tie-up between Revlon and Columbia Recording Corp., is about the largest and most carefully planned ever tried between two firms, in which each will promote its own and the other's product in a national advertising campaign and a wide variety of other devices. If the scheme works, it can be expected many more similar ones, on an even larger scale, will result.

Introducing the latest shade in lipstick and nail polish, "Ultra-Violet," Revlon combines with Columbia, in a double barreled campaign, pushing its singing star, Dinah Shore.

An important phase of the plan is the revamping of the old song "Who'll Buy My Violets?" The lyrics have under-



Retail sales of cosmetics for the twelve months ended with July 1946 totaled $841,091,000. This compares with $840,253,000 for the twelve months ended with June 1946 and with $783,000,000 for the twelve months ended with July 1945.



Strategic Stockpiles

FOR YOUR CONVENIENCE . . .

Scattered throughout the United States and Canada in convenient locations are stocks of Pyrex, Vycor and Corning brands of laboratory glassware. These are the inventories your laboratory supply dealer carries . . . carries for only one reason—YOU.

In a sense each of these inventories is personal. For all are different. Each is built-up and maintained for the selected group of customers served by a particular laboratory supply house. Stocks carried are based on the dealer's knowledge of his customers' needs and are always as complete and as well balanced as factory shipments permit. If your dealer hasn't a particular item, you may be sure the factory hasn't it either. That is why Corning Glass Works urges you to contact your dealer whatever your requirements may be. His is a professional service to professional men. He is the one who can serve you best. The closer you work with him the more time and money you save.

Corning Glass Works is proud of its dealers and wants all users of all its laboratory glassware lines to learn to know their nearest dealers better . . . and to use their services to the fullest extent.

T.M. REG. PYREX U.S. PAT. OFF.

TRADE MARK VYCOR REG. U.S. PAT. OFF.

T.M. REG. CORNING U.S. PAT. OFF.

"Pyrex," "Vycor" and "Corning" are registered trade-marks and indicate manufacture by

CORNING GLASS WORKS · CORNING, NEW YORK

FOR ALL-AROUND USE . . . YEAR ROUND ECONOMY

PYREX brand LABORATORY GLASSWARE

CORNING *means* Research in Glass

Evyan, Ltd. introduces "Splash," an after-bath fragrance. Potently perfumed with the White Shoulders fragrance, it makes a splashing, lilting luxury that leaves its aura of delightful scent.

Revlon has used a fantasy of brilliant colors from fuschia to violet with silver lettering to accent the gay box used for its new Ultra Violet color promotion.

Dermetics presents a new perfume and cologne simply called 1199. Delicately provocative, 1199 fragrance is a delight for fall and winter furs.

gone some changes, and the word "Ultra" has been stuck in the song. Revlon intends to spend about $500,000 this fall advertising the new color, more than it has ever put behind one campaign before. Columbia for its part is spending $100,000 to push the records of the song, but their main motive is to build up Dinah Shore. So while Revlon's idea is to put over the color, Columbia's is a promotion to keep Miss Shore its top singer.

Aside from advertisements in national and fashion magazines, Newspaper advertising in cooperation with department stores will also be used.

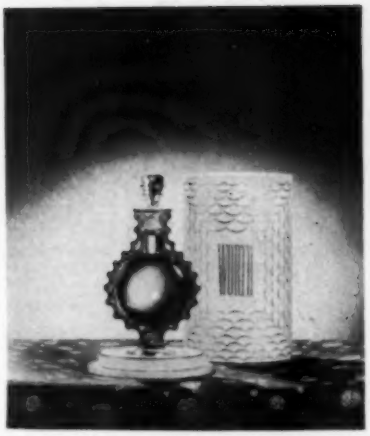
An example of the cooperation between the two firms is as follows; Revlon advertisements: "Hear the Ultra-Violet Song! Colorful new recording of 'Who'll Buy My Violets' sung by Columbia Records star, Dinah Shore."

Columbia will reciprocate with: "Hear Dinah's latest! her ultra version of "Who'll Buy My Violets' inspired by Revlon's newest top-fashion color creation, Ultra-Violet."

Perfume Parade

The perfume parade seems to be in full swing once again and among the fabulous newcomers is Schiaparelli's Le Roy Soleil, The Sun King. The Baccarat crystal bottle is a luxurious looking affair holding four ounces of warm, golden perfume, topped by sunburst stopper. Le Roy Soleil takes its name from Louis XIV whose epoch is considered one of the most glorious in history. The bottle rests in splendor on white satin in a golden shell-like package. The fragrance was launched in Paris before a distinquished audience which included Mrs. Byrnes, wife of the Secretary of State, Mrs. Jefferson Caffery, wife of the American Ambassador to Paris, and a brilliant gathering of visitors to Paris for the Peace Conference. The price? Four ounces for $150.

Dark Brilliance is the name chosen for Lentheric's first new perfume in seven years. Its deep sensuous, dark base of spicy warmth is overlaid with a vivacious, flowery-fruity note. Dark Brilliance reflects the attitude of fall fashions—fabrics rich in texture, colors deep and glowing, jewels brilliant, furs magnificent, hats dramatic, and accessories a series of glitter. It is strikingly presented. The flacon, simple and classic, is inscribed with the name in gold, the stopper tied into a frosty knot. The box is gleaming black, with the



"Requete," a new Worth perfume makes its bow in America in a fine Lalique crystal flacon. It is delicately chased with blue in Lalique's unique jewel-cut manner. Distributed by Al Rosenfeld, Inc.

Schiaparelli launches its new perfume "Le Roy Soleil," in November in a bottle topped by a sunburst stopper, resting on white satin in a gold shell-like package.

Dark Brilliance is Lentheric's first new perfume in seven years. The flacon is simple with the name inscribed in gold and the stopper tied into a frosty knot.

Your *Carton*

IT'S WORTH DRESSING UP!

When it's time to bring out new package designs it's time to check these points — the skill of the creator, the convenience of the containers, and the appealing features that dress up the line.

These factors *should* add up to successful carton salesmanship. But the task is not easy when materials are scarce, facilities overloaded, and production unpredictable. More reasons to dress with care!

One basic carton improvement is RIDGELO CLAY COATED BOXBOARD. For clay coating is the smooth, bright, silky-white surface that always dresses up cartons. It is not now in plentiful supply but independent boxmakers are doing their best to serve you.

Ridgelo
CLAY COATED
BOXBOARDS

MADE AT RIDGEFIELD, N. J.
BY LOWE PAPER COMPANY

Representatives
H. B. Royce, Detroit • Norman A. Buist, Los Angeles • A. E. Kellogg, St. Louis • Philip Rudolph & Sons, Inc., Philadelphia

Prince Matchabelli presents The Royal Box under whose lid there is a one ounce golden crown of Prince Matchabelli's Katherine the Great perfume. Package design by Enid Edson.

The combination package consisting of oil and lamp called "Cosmetron," a result of research by Delettrez Inc., and Sylvania Electric Products.

Ponds is introducing "Angel Face," a new make-up that goes on without water and gives a smooth texture and color warmth. Angel Face is smoothed on simply with its accompanying puff.

name repeated in gold script and decorated with a tassel of white, fuchsia, purple and green.

Requete, archaic French word for "request," is the name of Worth's new fragrance. Worth's Requete de luxe presentation is contained in Lalique crystal flacon made in France. It is delicately chased with blue in a unique jewel-cut manner. Requete is a subtle diffusion that expresses complete femininity.

Madrigal is Suzy's contribution to the perfume parade. Madrigal is a chic fragrance for rich fabrics, fine feathers and precious furs. Madrigal is packaged in a diamond shaped box studded with sparkling stones on a blue base. The classically simple bottle is topped with a diamond-shaped crystal.

These are just a few of the highlights in perfume and there are many others and still others in the making. The point is that the keynote is one of extreme luxury, elegance, and imagination.

Beauty Treatment at Home

A new "at home" face and skin beauty treatment called "Cosmetron" consisting of an oil and a specially engineered lamp has been developed both by Delettrez, Inc., and Sylvania Electric Products Co., Inc.

Both Sylvania and Delettrez conducted extensive independent laboratory research on the new cosmetic treatment before merging their efforts to complete its development. Delettrez had been engaged in perfecting the oil for the treatment for more than twelve months.

Packaged as a cosmetic item, the Cosmetron set will be distributed through drug wholesalers now handling the Delettrez lines. It will retail for $6.50. By applying the Delettrez oil to the face and then sitting for a few minutes before the Sylvania lamp, the treatment is described as giving a woman a "salon treatment at home."

Hobb's Men's Line

Nesor Co., manufacturers of Hobbs Men's Toiletries, have packaged an "Englishman's quality," cologne, shave soap, shave lotion and talc, all with the "well bred accent," in distinctive 22 KT all gold and ivory and gold bisque ceramic art pieces. The richly contrived items range from $5 for the gentlemen's shave soap in 5 oz. jars and the cologne talc, to $6.50 for the all gold shave soap jar and $10.00 for the after shave lotion in 10 oz. flacons.

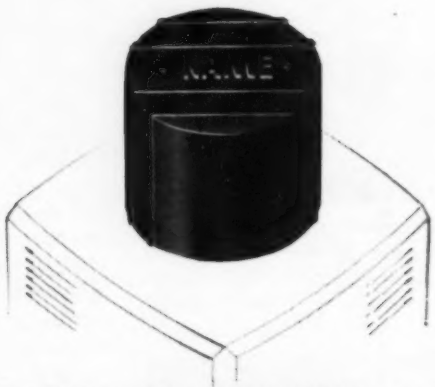
Madrigal is a haunting new melody in fragrance by Suzy. It is packaged in a diamond-shaped box studded with sparkling stones on a blue base.

Parfums Zofaly of Paris, creator of a number of successful perfumes, features Passion in the American market, packaged in a gold-framed black suede box.

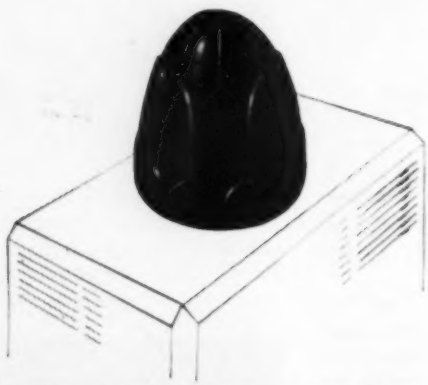
Nesor has made up shave lotion and soap containers in both ivory and gold bisque ceramic art pieces, and all gold. The line also includes cologne and talc.

Sales-stimulating suggestions for your private mold caps

PACKAGES FOR MEN gain a fresh, distinctive appearance with Artmold Caps specially designed to catch the masculine eye. Attractive cameo designs distinguish your package, build recognition for your line.



HIGHLIGHT YOUR BRAND NAME with a modern Artmold Cap. Set against your own choice of background, depressed and filled in with color, your name or trade-mark leaps to greet the customer's eye.



TALL, GRACEFUL Artmold Caps add height to your package. Smart bud pattern is only one of an unlimited variety of designs you can use for business-building style and beauty and performance.

INDIVIDUALIZE YOUR "LUXURY TRADE" items with cap design motifs. Clever cameos in Artmold Caps set off your brand name, add distinctive beauty that stimulates brand recognition, builds sales.

ARMSTRONG'S *Artmold* PLASTIC **CAPS**

GET A HEAD START on competitive products by giving your packages the extra style, beauty, and distinction of Armstrong's Artmold Caps. For design suggestions, send a sample or drawing of your package to Armstrong Cork Co., Glass and Closure Div., 3810 Prince St., Lancaster, Pa.

"WINNERS are notably endowed with SPEED—PRECISION, AND PERSONALITY"

says ROBERT GAIR

Modern types of packaging machinery are endowed with speed, and personality too . . . and each machine demands a "uniform precision" carton . . . just the kind of distinctive "tailor made" cartons that Robert Gair has been creating and producing consistently for over eighty years . . . cartons that are ***GAIRonteed***.

From a "selling impulse" viewpoint many of our cartons have joined the parade of constant WINNERS.

Write for 22-page descriptive brochure, featuring 28 photographs of POST-WAR automatic packaging machines.

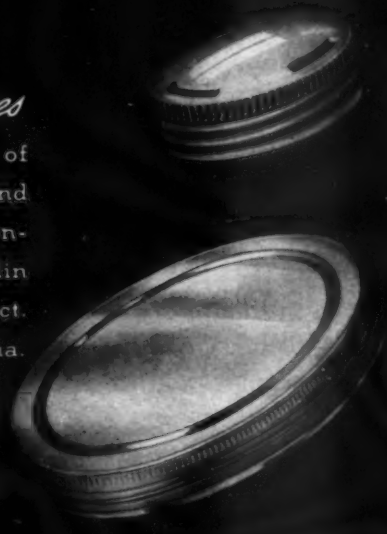
ROBERT GAIR COMPANY, INC., NEW YORK—TORONTO • PAPERBOARD—FOLDING CARTONS—SHIPPING CONTAINERS

QUALITY COUNTS*

BERNARDIN
Metal Closures

A famous merchant once said, "The remembrance of quality remains long after the price is forgotten." And that is as true of closures as of fine horses. Concentrating for many years on closures *alone*, Bernardin engineers and craftsmen have created a fine product. Bernardin Bottle Cap Company, Evansville, Indiana.

** Quality counts in closures too!*



Since 1881 — America's First Manufacturer of metal closures

HOW STRETCHING A CARDBOARD BOX SOLVED A GLASSMAKING PROBLEM

During the war, when carton board for packing glass containers was even scarcer than it is now, a glassmaker's ability to supply his customers with bottles frequently depended upon his skill in utilizing board to the best advantage. So when one of Armstrong's customers requested greatly increased production on a vital container, it was Armstrong's Package Engineering Department that was consulted, rather than the plant engineers or chemists.

Packing two dozen containers to the box instead of one offered one way to stretch available board. A two-tier box wouldn't handle well on the customer's production line—but a one-tier, two-dozen package was eventually engineered that saved enough board to enable the customer to receive 100,000 extra cases of bottles a year!

Simple and obvious? Perhaps. But it exemplified the resourcefulness displayed by the trained technicians in Armstrong's Service Departments in meeting and solving glass and closure problems that are bound to occur in the present period of shortages.

Skilled package engineering is only one of the many specialized services available to Armstrong customers. Hundreds of specially trained research men, traffic men, purchasing agents, package designers, and other specialists are constantly on the job to make sure you get the best in glass and closure service.

For full information about Armstrong's Glass or Closures, call your Armstrong representative, or write direct to Armstrong Cork Co., Glass and Closure Div., 3810 Prince Street, Lancaster, Pa.

There is...
something up our sleeve!

There's magic in magic . . . and there's magic in packaging, too . . . the kind of packaging that brings buying response.

But creating eye-appealing containers of distinction is more than a parlor trick . . . so when we say there *is* something up our sleeve we mean there's packaging skill at Warnercraft to fit your every need.

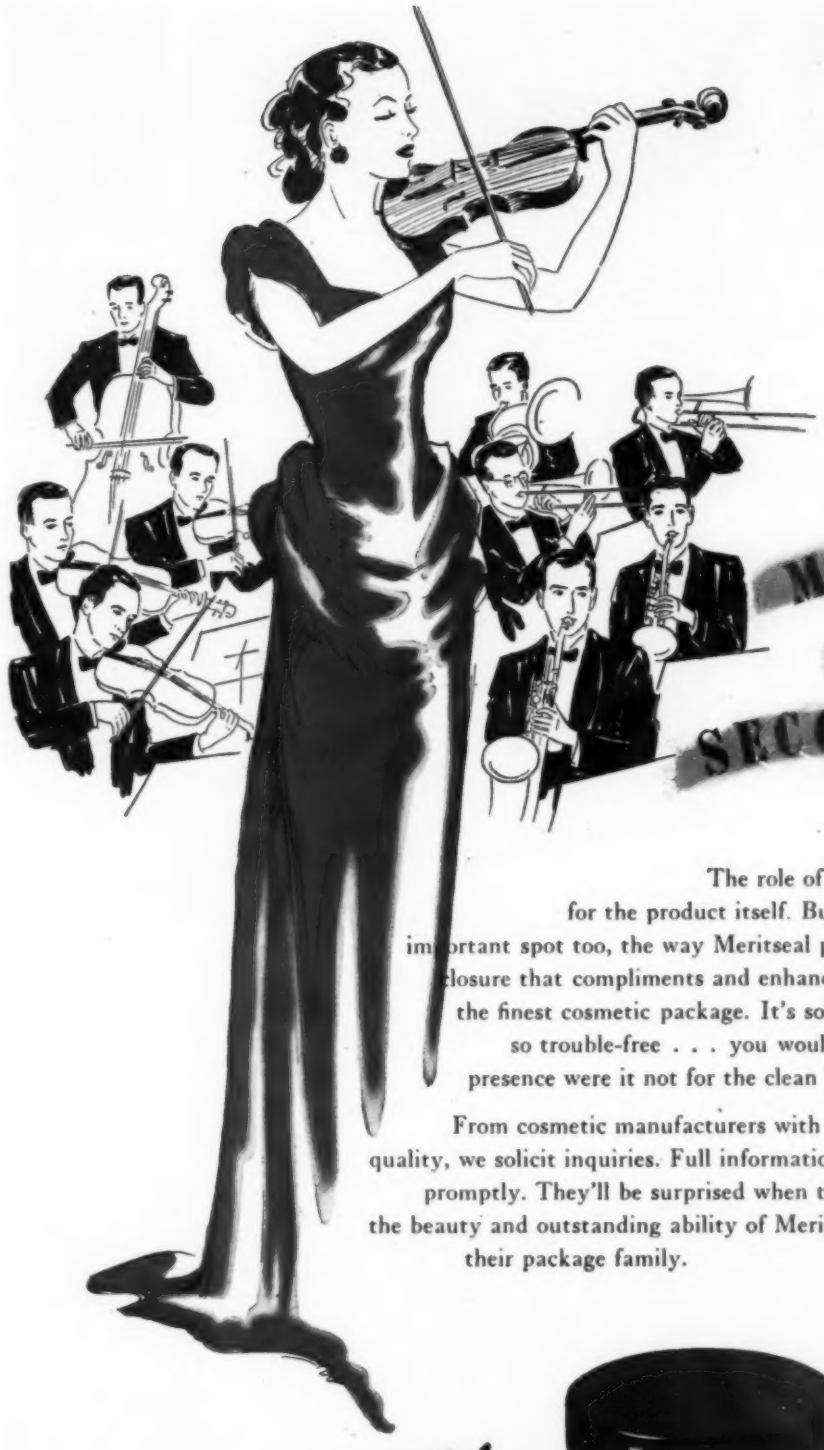
For sales "magic" . . . for packages designed for BUYING . . . bring your problems to Warnercraft.

Makers of set-up and folding boxes of all types, transparent acetate containers, hand made specialties, counter displays and dispensers.

THE WARNER BROTHERS COMPANY

Main Office and Factory: 325 Lafayette Street, Bridgeport, Conn.
New York Sales Office: 200 Madison Avenue, New York, N. Y.

WARNERCRAFT

"THE FINEST WORD IN PACKAGING"

MERITSEAL PLAYS SECOND FIDDLE

The role of "first violin" is rightly reserved for the product itself. But "second fiddle" is a mighty important spot too, the way Meritseal plays it. Meritseal is the kind of closure that compliments and enhances the appearance of even the finest cosmetic package. It's so efficient, so dependable, so trouble-free . . . you wouldn't be aware of Meritseal's presence were it not for the clean lines and clear sparkling colors.

From cosmetic manufacturers with products of "first violin" quality, we solicit inquiries. Full information and samples will be sent promptly. They'll be surprised when they find out how reasonably the beauty and outstanding ability of Meritseal can be added to their package family.

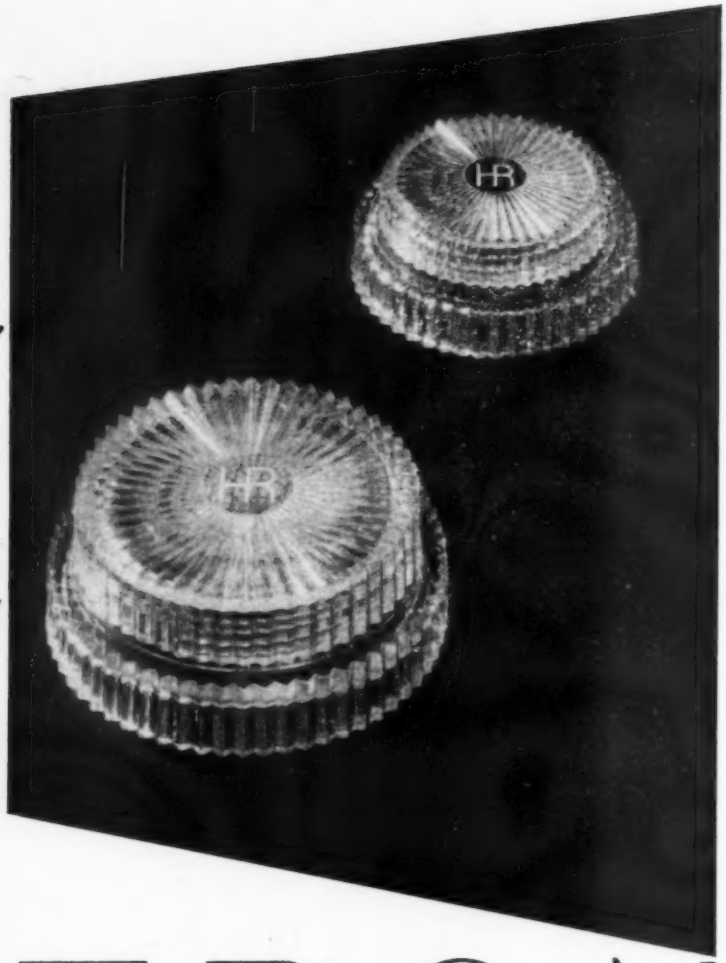
Meritseal—

CROWN CORK SPECIALTY CORP.
Division of
Crown Cork & Seal Company

MAIN OFFICE: DECATUR, ILL. • NEW YORK: 60 EAST FORTY-SECOND STREET • CHICAGO: 4343 WEST FIFTH AVENUE
WESTERN REPRESENTATIVE: WESTERN CROWN CORK & SEAL CORPORATION . . . SAN FRANCISCO . . . LOS ANGELES

"I seek Style"

"I seek Value"



Appeal to both with LUSTRON

One eye for style, one eye for thrift... that's the smart American shopper today.

And that's why the Helena Rubinstein rouge compact... of Monsanto's versatile Lustron... is so popular. Lustron makes it both luxurious and low in price.

If you're selling women (and 85% of all merchandise *is* sold to them!) consider the advantages of Lustron packages, package components, re-use containers:

1. **Unlimited colors**
2. **Dimensional stability**
3. **Freedom from taste or odor**
4. **Excellent resistance to common acids, alkalies, salts, alcohols**
5. **Low moisture absorption**
6. **Light in weight and low in cost per pound**
7. **Molded easily in fastest, most economical modern molding techniques**

For full details on Lustron for packaging write direct today: MONSANTO CHEMICAL COMPANY, Plastics Division, Springfield 2, Massachusetts. In Canada: Monsanto Ltd., Montreal, Toronto, Vancouver.

Lustron: Reg. U. S. Pat. Off.

VUE-PAK
TRANSPARENT PACKAGING MATERIAL

MONSANTO
PLASTICS
SERVING INDUSTRY ... WHICH SERVES MANKIND

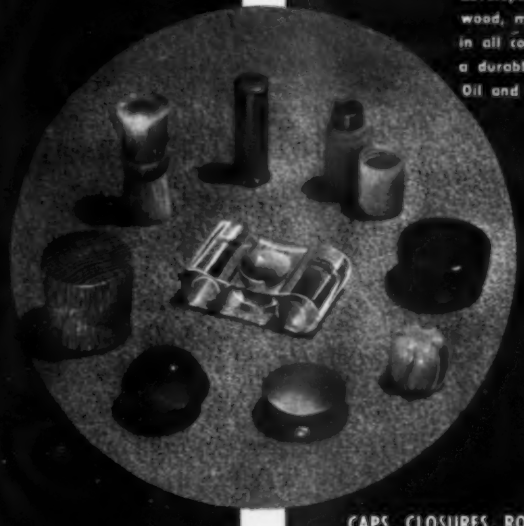
THE MAGIC TOUCH
IS THE FINISHING TOUCH

SILK SCREEN DECORATING

on glass, wood, metal or plastic.
Fontaine's extensive research in decorating processes now bring you plastic paint colors that adhere permanently, to both flat and round surfaces.
All paints are baked on.
Extremely resistant to oil and alcohol.
We design a motif or execute your own.

SPRAYING

Our own lacquer formulas developed for spraying glass, wood, metal and plastics in all colors. Achieves a durable high gloss.
Oil and alcohol resistant.



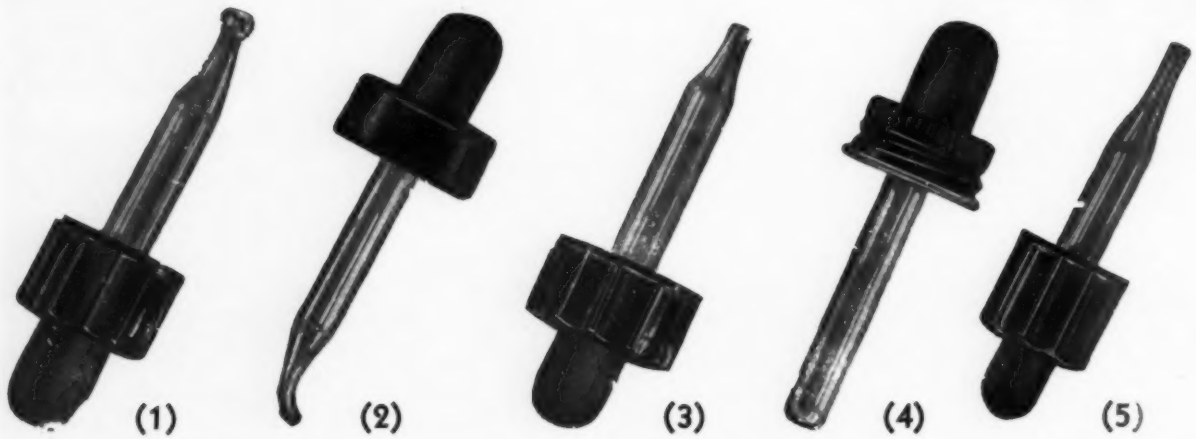
CAPS, CLOSURES, ROUGE BOXES, LIPSTICK CONTAINERS

and other cosmetic specialties.
Injection, compression molded or fabricated to your specifications.
Ask for the new Fontaine
ALL-METAL LIPSTICK CONTAINER
or COMBINATION PLASTIC
AND METAL LIPSTICK CONTAINER.

FONTAINE PRODUCTS CO.
art in plastics
306 EAST 61st ST. • NEW YORK 21, N. Y.

New Perfection DROPPING PARTS

• • • • • • WILL MEET • • • • • •
YOUR
• • • INDIVIDUAL NEEDS • • •



(1) Non-rolling, extra depth, Bakelite Cap with thick flange rubber part: Saftee ball glass.

(2) Double shell metal cap; special thin flange rubber part; special bent glass.

(3) Regular or acid resisting plastic cap; regular rubber part in various colors; semi-blunt glass.

(4) Single shell metal cap; thin flange, non-swelling Amekine synthetic rubber part, without strong odor; blunt glass.

(5) Fancy colored beetle cap; midget rubber part; regular straight glass.

Every Dropping Part Is Carefully Made

In our effort to make better New Perfection Dropping Parts, we leave nothing to chance, but strive continuously to improve whenever that is possible. We are always glad to cooperate with you in recommending the proper New Perfection Dropping Part to meet your specific needs.

When you write us for samples and prices, be sure to mention quantities, styles, and give the dropping part number as illustrated above. If desired, dropping parts can be furnished with 2 cc., ⅛, ¼, ½, 1, and 2 ounce New Modernistic bottles in Amber, Blue, Clear, or Green.

Write for Samples and Prices

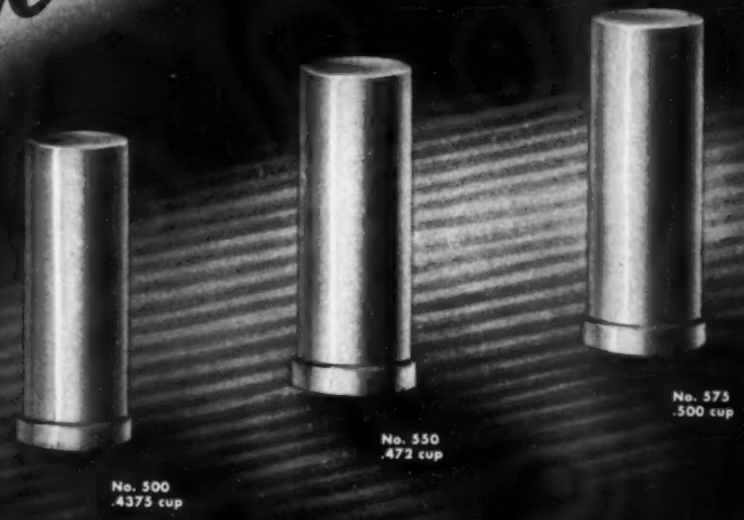
PENNSYLVANIA GLASS PRODUCTS CO.

"GLASS GOODS OF THE BETTER KIND"

428-432 NORTH CRAIG STREET . . . PITTSBURGH, PA., U. S. A.

Rich Low BRASS

SWIVEL LIPSTICK CONTAINERS



"Fashioned Like Jewels"

THE ULTIMATE IN QUALITY

- De Luxe polished Rich Low brass — baked lacquer finish
- Free wheeling mechanism — It is impossible for the filler to swivel up while the cap is on
- "Click-Tite" closure*

PHONE, WIRE OR WRITE FOR SAMPLES

BRODER INDUSTRIES

INCORPORATED

167 WEST 64th STREET, NEW YORK 23, N. Y. • TRafalgar 7-0092

*Patents Pending

Quality---

what does that mean?

When we talk about the "quality" of SWINDELL bottles, the word means different things to different people. To some, it means beauty of design that lends glamor and lustre to your product.

To some, it means sturdiness and durability that insures you against undue shipping losses.

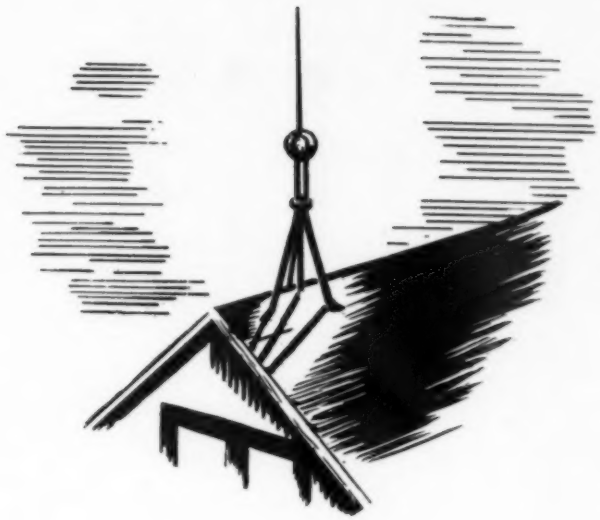
To some, it means dependability in delivery of uniformly good looking products.

But here's the point — whatever "quality in bottles" means to you, SWINDELL's hundred year tradition of skill makes certain that you get it here—in stock or private mould bottles, machine or hand made.

SWINDELL BROTHERS, Inc.

200 FIFTH AVE., NEW YORK ★ BALTIMORE 30, MARYLAND ★ ROBERTO ORTIZ • HAVANA, CUBA

Swindell



PROTECTOR

The can, too, is a symbol of protection. What's more, when that can is a National can, you're assured that there's no greater protection for your product.

In its service, National Can reflects almost half a century of metal container experience — reflects, also, the ingenuity of its engineers in applying their knowledge to your problems.

NATIONAL CAN CORPORATION

Executive Offices: 110 East 42nd Street, New York 17, N. Y.

SALES OFFICES AND PLANTS: BALTIMORE, MD. • CHICAGO, ILL. • HAMILTON, OHIO
BOSTON, MASS. • DETROIT, MICH. • INDIANAPOLIS, IND. • MASPETH, N. Y. • McKEESPORT, PA.

FOR FAMOUS MERCHANDISE...

REVLON is a well-known name in cosmetics. It gets sales-producing attention by quality standards, offered in distinctive closures and containers of Plaskon Molded color. ☆ Plaskon was chosen for use with Revlon FATAL APPLE cosmetics because it assures drug trade products these advantages:

- ★ Plaskon is impervious to the effects of alcohol, acetone or other organic solvents.
- ★ Plaskon can be molded into distinctive designs and shapes.
- ★ Plaskon is available in a wide range of permanent colors.
- ★ Plaskon is not affected by oils or fats.
- ★ Plaskon is odorless, tasteless, inert.

Your molder, or experienced Plaskon men, will be glad to show you how Plaskon can be used to give your products extra sales appeal.

PLASKON

TRADE MARK REGISTERED

MOLDED COLOR

PLASKON DIVISION • Libbey-Owens-Ford Glass Company
2110 Sylvan Avenue • Toledo 6, Ohio
Canadian Agent: Canadian Industries, Ltd., Montreal, P. Q.

DOGS . . . .

that go to the people!

They're the St. Bernards . . . made famous through the years by their rescue of travelers lost during storms in Alpine passes. Descended from the Roman mastiff, their present name was acquired from the St. Bernard pass in Switzerland where they first appeared about 1660.

Used extensively by the St. Bernard monks for rescue work, their outstanding performance has been due more to their inherent characteristics than to any planned program of training. A sure sense of direction, even in dense fog and snow, remarkable endurance, and unfailing faithfulness are attributes that make the St. Bernards so well suited to their work. It is only by consistently fine performance like this that confidence is won and held.

Here at Carr-Lowrey we are justifiably proud of the uniformly high quality of our product . . . but we are more proud of the confidence placed in us by buyers of commercial glass containers . . . confidence that is evidenced by their repeat orders over a long period of years.

CARR-LOWREY GLASS CO.

Factory & Main Office: Baltimore 3, Md. • *New York Office:* 500 Fifth Ave. (18) • *Chicago Office:* 1502 Merchandise Mart (54)

GOLLY! DID YOU SEE THIS MONTH'S CONTINENTAL AD?

It's another full-page, four-color ad in leading magazines—telling about the wide variety of products made by Continental and how they serve the nation. Watch Continental grow! It's a big family, growing bigger—with one policy—"best in quality, best in service."

TIME
*Caps that hold the zip in drinks . . . Paper cups for eats
Fibre drums with metal ends . . . And cans for tasty treats
ALL ARE MADE BY CONTINENTAL CAN COMPANY
Continental agrees... behind the scenes... behind the labels of America's finest products

LIBRARY

KIMBLE GLASS VIALS

...A FINISH FOR EVERY PURPOSE

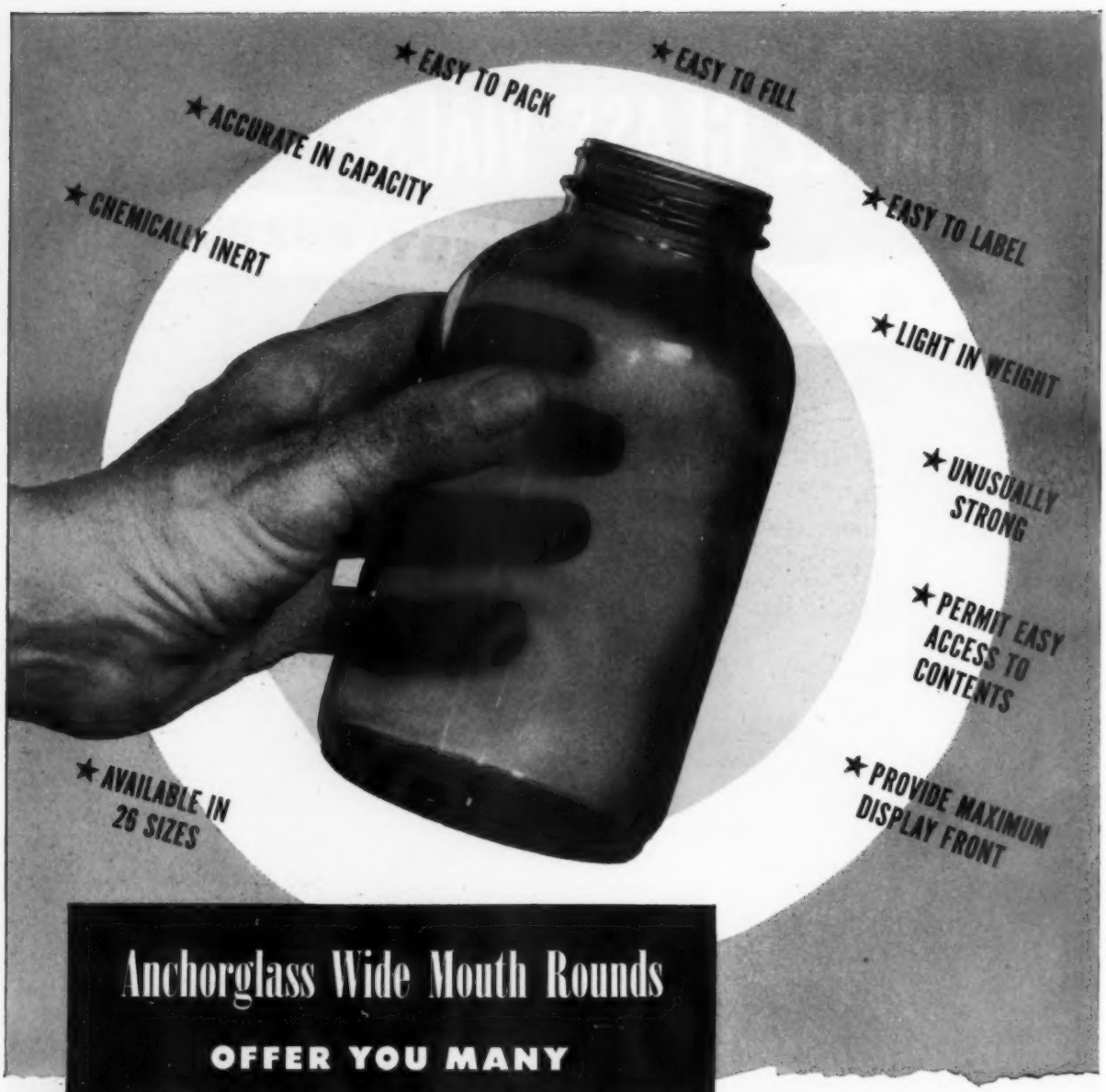
For Assurance

K

• • • The Visible Guarantee of Invisible Quality • • •

KIMBLE GLASS COMPANY . . . . VINELAND, N. J.

NEW YORK • CHICAGO • PHILADELPHIA • DETROIT • BOSTON • INDIANAPOLIS • SAN FRANCISCO


★ EASY TO PACK
★ EASY TO FILL
★ ACCURATE IN CAPACITY
★ CHEMICALLY INERT
★ EASY TO LABEL
★ LIGHT IN WEIGHT
★ UNUSUALLY STRONG
★ PERMIT EASY ACCESS TO CONTENTS
★ PROVIDE MAXIMUM DISPLAY FRONT
★ AVAILABLE IN 26 SIZES

Anchorglass Wide Mouth Rounds

OFFER YOU MANY IMPORTANT ADVANTAGES

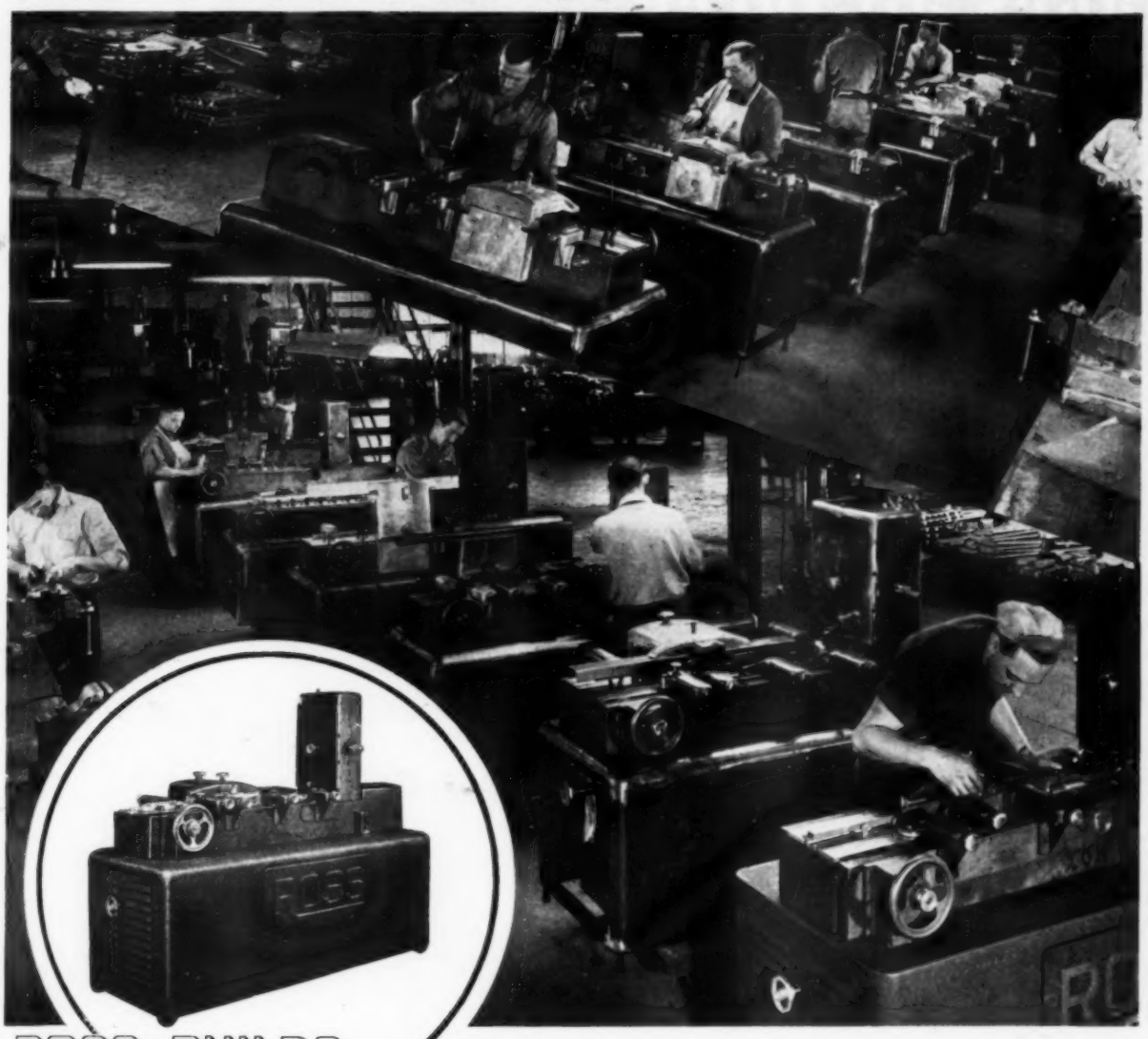
Tune in "Crime Photographer" every Thursday evening, entire Coast-to-Coast Network, CBS.

ANCHORGLASS Wide Mouth Rounds are ideal containers for powders of all kinds, tablets, pills and heavy liquids. They are easy to fill, label and pack. They're light in weight, yet unusually strong. They're chemically inert, accurate in capacity, permit easy access to the contents and provide the maximum display front possible. Anchorglass Wide Mouth Rounds are supplied in amber and are available in twenty-six sizes ranging from 3 cc to 4000 cc in capacity. Samples for experimental or test purposes will be gladly supplied on request.

Anchor
CONTAINERS and CAPS

PRODUCTS OF
ANCHOR HOCKING GLASS CORPORATION
LANCASTER, OHIO

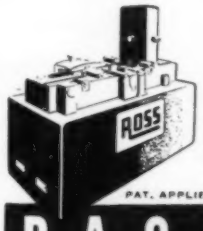
THE ROSS WAY IS THE NEW WAY



ROSS BUILDS *standardized high precision packaging machinery on a production line basis*

ROSS automatic and semi-automatic cartoning machinery is unique in the industry. Functional streamlining, engineered for precision adjustments, with all parts machined with fixtures and jigs, insuring complete interchangeability.

Assembly line production using standard, precision built parts, eliminates future replacement problems — eliminate prolonged "downtime".



A. H. ROSS and Co.

LUDLOW · KENTUCKY

PRECISION PARTS · SELF OILING · DIAL CONTROL
VERSATILE ADJUSTABILITY · MASTER SPEEDRANGER

PACKAGING MACHINERY

A SUBSIDIARY OF THE ROCKWELL MANUFACTURING COMPANY

It takes all three to make an Aspirin tablet!

- *A fine chemical of measured purity*
- *Your technical skill in manufacturing*
- *Rigid laboratory control in your plant*

Millions of aspirin tablets like this one move off druggists' shelves every year — to help prevent colds, to relieve millions of headaches and to deaden pain.

Small, unimpressive-looking, this tablet is nevertheless made with infinite care by a number of leading pharmaceutical houses.

And in that making, are these three vitally important factors:

— selection of the most uniform quality acetylsalicylic acid, which is the foundation of an aspirin tablet.

— scientific compounding and processing of all the ingredients into a quality finished product.

— rigid laboratory control, including testing of all raw materials, and constant testing of the product as manufactured.

The first of these factors is, naturally, one of great concern to Baker.

And it is equally important to the aspirin tablet manufacturer.

Choosing a fine chemical with purity to the decimal — such as Baker's acetylsalicylic acid U.S.P.— makes the manufacturer's job easier all the way.

For more than 40 years, Baker has built its chemical business on measured purity. That is why leading pharmaceutical and drug companies choose Baker as a source of supply. They know that Baker's purity by the ton in fine chemicals is the result of unique control methods and ceaseless testing.

When you specify any Baker fine chemical, you specify quality *at the beginning* and you get it. Both your compounding and your laboratory control are simplified. You have quality insurance for your products.

J. T. Baker Chemical Co., *Executive Offices and Plant:* Phillipsburg, N. J.; *Branch Offices:* New York, Philadelphia and Chicago

Baker's

FINE CHEMICALS

NEWS...

Penick Appoints Bouton

S. B. Penick & Co., has appointed John A. Bouton head of their food flavoring division. A graduate of St. John's University, Mr. Bouton is well known in the flavor industry where he has had many years experience in the research, development, and manufacture of flavors used for food and pharmaceutical preparations.

Glass Makers Get Medal of Merit

Three leaders in the glass industry, all top executives of companies with headquarters in Toledo, were among 15 civilians honored by President Truman by being awarded the Medal for Merit.

They are William E. Levis, chairman of the board of Owens-Illinois Glass Co., John D. Biggers, president of Libby-Ownes-Ford Glass Co., and Harold Boeschenstein, president of Owens-Corning Giberglass Corp. The three men served in the War Production Board and its predecessor, Office of Production Management, on separate assignments.

E. I. Hopkins and Van Nortwick on Board

E. I. Hopkins has been appointed executive vice-president and a director of J. L. Hopkins Co., founded by his father J. L. Hopkins in 1890. Mr. Hopkins has spent all his business life in the botanical drug business, for many years he has been in charge of the company's West Coast branch. He was also active as president of the California Prune and Apricot Association.

E. I. HOPKINS

Along with this there was another appointment, that of J. G. Van Nortwick, as vice-president in charge of sales and director of J. L. Hopkins Co. Mr. Van Nortwick has served the company for the past nineteen years in the capacity of salesman, field sales manager, and general sales manager.

J. G. VAN NORTWICK

Penick Appoints Hagelin

S. B. Penick & Co., announce the appointment of Roy W. Hagelin, as assistant sales manager of essential oil, aromatic chemicals and food flavor materials.

A graduate of Columbia University, Mr. Hagelin has been a specialist in the essential oils and aromatic chemicals field for over a period of sixteen years.

Shine Joins Dermetics

Dermetics, Inc., announce the appointment of George Shine, as assistant to the president, G. D. Runnels. Mr. Shine spent eight years with the Dennison Mfg. Co., before the war, and has just recently returned from five years of service in the army.

Joining the army as a 2nd Lieutenant, he rose to the rank of Lt. Colonel. Most of his time was spent overseas as operations officer, Special Troop, 12th Army Group.

Hein—Premo Sales Manager

Premo Pharmaceutical Labs. Inc., has added Henry F. Hein, to its staff as sales manager. Mr. Hein was formerly employed by the New York Quinine and Chemical Co., as the assistant sales manager. Previous to that he was in the sales department of the Du Pont Chemical Co.

HENRY F. HEIN

Premo is glad to have Mr. Hein not only for his sales ability, but also to spark its bowling team. Mr. Hein was one of the king pins of NYQ's bowling team which nosed out Premo in the last tournament. Perhaps Premo believes in the policy of "If you can't beat 'em, hire 'em."

Aside from these extra curricula activities, Mr. Hein will be in charge of promotion of Premo specialties to the domestic and foreign market.

Alexander Wins Golf Cup

Chas. Alexander, of L. Sonneborn Sons, Inc., won the Chemists' Golf Cup at the final golf tournament of the Salesmen's Assn., of the American Chemical Industry, held at Plaindome, L. I. The cup is signatory of the championship of the association. R. L. Hutchins, of Commercial Solvents Corp., won the presidents cup. Among the other prize winners were: Fred. Hentz, of Harshaw Chemical Co.; William Mullen, of Joseph Turner & Co.; B. T. Bush, Sr., of Bush Aromatics Inc.; E. J. Maguire, of Grasselli Chemical Div., E. I. du Pont de Nemours & Co.; B. T. Bush, Jr., of Bush Aromatics Inc.; Frank Fanning; J. E. Spencer, of the Harshaw Chemical Co.; J. Robert Fisher, of the Fisher Chemical Co.; Herman Schulman, of Washine-National-Sands, Inc.; J. H. Stephenson, of Aromatics Products, Inc.; George F. Smith, and H. L. Simon of Harold L. Simon, Inc.

Ethavan, Monsanto's Ethyl Vanillin, a flavor principle with a "vanilla-like" odor and flavor, used as an aroma fixative in the formulation of soaps and delicate perfumes.

Coumarin Monsanto, a synthetic odor principle, used to enhance the bouquet of soaps and perfumes; also to amplify the more delicate aroma of vanillin.

Methyl Salicylate, Monsanto, U.S.P., Synthetic, Monsanto oil of wintergreen, used to impart pleasant odor to soaps for pets.

SALES SCENTS for your products

If the sales of your products respond to a pleasing fragrance, use Monsanto Ethavan,* Coumarin or Methyl Salicylate, U.S.P., to impart intriguing odors, accent aromas, or as a fixative. Many manufacturers have found that it is good sales sense to take advantage of the true aroma, unvarying strength and unusual "staying" powers of these Monsanto synthetics. They lend distinction to cosmetics and preserve their fragrant identity to the point of final use.

Try them! Samples of any or all of these Monsanto synthetic aromas will be sent on request. Contact the nearest Monsanto District Office, or write MONSANTO CHEMICAL COMPANY, Organic Chemicals Division, 1700 South Second Street, St. Louis 4, Missouri. District Offices in: New York, Chicago, Boston, Detroit, Charlotte, Birmingham, Los Angeles, San Francisco, Seattle, Montreal, Toronto.

*Reg. U. S. Pat. Off.

MONSANTO CHEMICALS

SERVING INDUSTRY...WHICH SERVES MANKIND

Gorgas Medal to Kelser

The Gorgas Medal, sponsored by Wyeth Inc., and awarded annually by the Association of Military Surgeons of the United States for outstanding work

GEN. KELSER

in preventive medicine for our armed forces, will go this year to Brigadier General Raymond A. Kelser. During World War II, General Kelser served as director of the Veterinary Division of the Surgeon General's office. He is being given the Gorgas Medal, which carries with it an honorarium of $500, for his work in eradicating rinderpest. a disease of cattle, in the Philippine Islands, making it possible for the Filipinos to have their own domestic milk supply. Now retired from active service General Kelser is dean of the College of Veterinary Medicine and professor of bacteriology, at the University of Pennsylvania.

Pearson Heads Matchabelli Sales

Paul W. Pearson has been appointed sales manager by Prince Matchabelli, Inc., under the direction of Leo V Talamini, executive vice president and director of sales. Previously he was assistant sales manager of Consolidated Cosmetics, distributors of Dana Perfumes.

Stearns Course for Detail Men

Because of rapidly changing medical developments, the Frederick Stearns & Co., Division, Sterling Drug Inc., is animating the educational program it offers to its professional service men who call on physicians, hospitals and pharmacists.

A library of five slide film presentations and four motion pictures has been prepared to furnish visual instruction and will be further increased by the addition of two more side films and another motion picture.

Norwich Opens Dallas Branch

The establishment of a new branch in Dallas has been announced by M. C. Eaton, president of Norwich Pharmacal Co., at 2803-05 Taylor St. The manager of the branch is Noble Reeves, heretofore district manager for the same area, which has been operating out of Chicago. Credit and office manager of the branch is Charles G. Bowers, formerly assistant credit manager of the company.

The new Dallas branch opened September 25, and is a complete distribution point, doing its own billing and credit work, and maintaining a complete stock of all Norwich and Eaton products.

Leshin Joins Weston International

Joseph Leshin, widely known in the cosmetic field, is now associated with Weston International Co., manufacturers of Weston Lighters and lipstick

J. LESHIN

containers. In his new capacity, Mr. Leshin will be in charge of the lipstick container division.

Backed by an experienced engineering and designing staff, he is enthusiastic about introducing a superior line of lipstick containers.

N.Y.Q. Appointments

Recent additions to the research staff of the New York Quinine & Chemical Works, Inc., include Howard Bindell formerly with S. B. Penick & Co., Dr. Manuel Baizer, General Chemical and Dr. Oscar Gawron from American Home Products.

Lambert Advances Morrill

Stanwood Morrill, formerly executive assistant, Lambert Pharmacal Co., St. Louis, has been made director of advertising and merchandising of that company.

Lt. Graham at Wakeman Hospital

Lt. Henry I. Graham, Medical Corps, is now stationed at Wakeman General Hospital, Camp Atterbury, Ind. Lt. Graham was formerly with Florasynth

LT. HENRY GRAHAM

Laboratories and in 1942 did extensive research on anti-oxidizing agents for citrus oil. His wife Zena, who was the office manager for Florasynth Laboratories in Chicago for the past three years, has accompanied him to Camp Atterbury, where they now reside.

Stearns Advances Walsh

Glenn Walsh, formerly of the Chicago district office, has been promoted to manager of the newly reorganized central division of the Frederick Stearns & Co., Division, Sterling Drug Co. Mr. Walsh will make his headquarters in Detroit. He has been associated with Stearns since 1943, and previously was with Sharpe & Dohme Inc.

Packaging in Sterling Drug

Consideration of modern package design, described as a "must" in marketing, was one of the major topics on the agenda of the annual joint meeting of the Sterling Drug Inc., marketing committee with the corporation's executive committee.

Alfred Burns, vice president, Chas. H. Phillips Co., div., presided at the meeting as chairman of the marketing committee. Other members are: D. H. Williams, The R. L. Watkins Co., div.; Stanley I. Clark, The Bayer Co., div.; R. E. Gray, The Centaur Co., div.; J. E. Wickes, General Drug Co.; Ray C. Brewster, Frederick Stearns & Co., div.; G. W. Neider, The Hilton-Davis Chemical Co., div.; J. N. Cooke, The Cummer Co., div.; J. G. Noh, Winthrop Chemical Co. Inc.; B. F. Ascher, George A. Breon & Co.; H. L. Schade and F. A. Tilston, The Bayer Co., Ltd. of Canada.

Snyder Heads Owens Promotion

Appointment of Nelson M. Snyder as manager of trade advertising of the sales promotion department of Owens-Illinois Co., has been announced by Kenneth

NELSON SNYDER

C. White, sales promotion manager.

Mr. Snyder succeeds Robert L. Lowrie who resigned recently to join the sales staff of Belknap & Thompson, Chicago sales specialists.

A native of Toledo, Mr. Snyder has had wide advertising experience. He has been with Owens-Illinois for more than five years working on direct mail campaigns and glass container advertising. For the past two years he has been production manager.

Newcomb Named NAW Treasurer

E. L. Newcomb, executive vice president of the National Wholesale Druggists Assn., was elected treasurer of the newly formed Nat. Assn. of Wholesalers.

The NAW., designed to supplant and absorb the council of the National Wholesale Associations, will serve wholesalers in the same manner as the NAM, the Amer. Retail Fed. and the Amer. Farm Bureau Fed., serves the general interests of manufacturers, retailers and farmers.

Additional elected officers include president Joseph Kolodny, vice president M. W. Bayfield, secretary H. D. Patrey, of the N.A.T.D.; chairman of the board and trustee Robert M. Adair; and trustees Sid L. Darling, directing manager of the Nat. Amer. Wholesale Lumber Assn., and B. W. Rurak, general manager of Motor and Equipment Wholesalers Assn.

With national headquarters in Washington, the N.A.W. will set up a research bureau devoted to making a continuous and thorough study of the mechanics of wholesaling, with an eye toward stimulating and developing new, more efficient methods of distribution.

Commercial Buys Dixie Ordnance

The Dixie Ordnance Works, Sterlington, La., has been purchased by Commercial Solvents Corp., from the War Assets Administration, Theodore P. Walker, president has announced.

The Dixie plant, constructed for the Ordnance Department and operated during the war by Commercial Solvents to produce anhydrous ammonia from natural gas, will resume production as soon as possible. Ammonia from the plant should be available for sale before the year's end. The new plant will become a source of raw materials to the company for the manufacture of nitroparaffins and other chemicals.

C. C. Boardman will be resident manager, J. E. Wheeler will be plant manager, J. R. Troeltzsch, production superintendent, A. P. Kimmig, office manager and Olin Manhart, plant engineer.

Pneumatic Scale Expands

Plans have been completed for the erection of a one story extension to the main factory of Pneumatic Scale Corp., Ltd., at North Quincy, Mass. Authorization for construction has been granted by the CPA, and work was begun October 1.

The first major expansion to be made by the company since 1920, when the present three story building was completed, this new structure will extend 210 feet from the south end of the main building and will provide an additional 33,500 square feet for the production of packaging and bottling machinery.

Penick Appoints Peterson

S. B. Penick & Co., has appointed Melvin G. Peterson as purchasing agent. Mr. Peterson had been connected for many years with the purchasing staff of

MELVIN PETERSON

the Firestone Tire & Rubber Co., Akron, Ohio.

A graduate of Kansas State College, Mr. Peterson entered the Army in 1941 and upon his discharge held the grade of Lt. Colonel. During this time he was assigned to the office of the Chief Ordnance, Washington, where he was in charge of procurement activities and accounting.

F. J. Lueders in 25 Year Club

Frederick J. Lueders, president of George Leuders & Co., was inducted into the Twenty-five Year club of the company, he is the thirty-eighth member to join.

New and retiring leaders of the NWDA, pictured at Atlantic City; (seated L to R) John W. Allen, McKesson Robbins, Inc., Dallas, new 5th vice-president; R. B. Rucker, McKesson & Robbins, Inc., Los Angeles; P. A. Hayes, Justus Drug Co., senior council; G. Barrett Moxley, Keefer-Stewart Co., senior council; E. A. Newcomb, executive secretary; A. B. Benson, McKesson & Robbins, Inc., retiring president; C. C. Caruso, Schieffelin & Co., new president; J. D. Crump, McKesson & Robbins Inc., Macon, Ga., new chairman of the board of control; Dr. Newcomb, executive vice-president; James A. Horton, FTC; Leo A. Lanigan, McKesson & Robbins Inc., senior council; James W. Roberts, H. B. Gilpin Drug Co., senior council; W. J. Schieffelin, senior council; E. S. Albers, Albers Drug Co., board of control; (Standing) Robert Morrison, Cook, Everett & Pennell, new member of control board; W. J. Mooney, Mooney, Mueller & Ward, Indianapolis, new control board member; H. S. Price, Orr, Brown & Price, member of control board; J. Mahlon Buck, Smith, Kline & French, Inc., senior council; A. F. Munster, San Antonio Drug Co., retiring control board member; L. W. Hutchins, Hazeltine & Perkins Drug Co., member of control board; George Van Gorder, McKesson & Robbins Inc., senior council; Claude L. Smith, McKesson & Robbins Inc., Cleveland, new 1st vice-president; B. W. Badanes, McKesson & Robbins, Inc., member of the control board; and Lace I. Fitschen, Alexander Drug Co., Oklahoma City, senior council.

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U.S.I. CHEMICAL NEWS

October ★ A Monthly Series for Chemists and Executives of the Solvents and Chemical Consuming Industries ★ 1946

Air Speed Record Set With Alcohol-Water-Injection

The Labor Day Thompson Trophy race—America's annual speed classic of the air—was won this year by Major "Tex" Johnston with a record speed of 373.908 miles per hour. Johnston, flying a Bell P-39 Airacobra for Skylines Unlimited, flashed his plane around the 300-mile Cleveland course, winning easily in a field of twelve starters.

The Thompson Trophy winner used alcohol-water-injection in his Allison engine, "souping up" his racer to maximum performance. Essential ingredient of the alcohol-water-injection used by Johnston is U.S.I.-manufactured "Vitol," a product employed during the war as a source of tremendous emergency power for fighter planes. Wide peacetime use in fuel-injection systems and application in other unique aviation power-plants is forecast for this specially-developed extra-power compound.

Says "Moon Blindness" Is Controlled by Riboflavin

Periodic ophthalmia, which causes temporary and frequently permanent blindness in horses has been found to be due to a deficiency of riboflavin in the diet, according to an American scientist. The disease, known as "moon blindness," can be avoided, he asserted, by adding riboflavin to the diet at the rate of 80 grams per ton of feed. This eye trouble is said to cost American horsemen more than $17,000,000 each year. Two new natural riboflavin concentrates, which also contain other members of the vitamin B complex, are now being offered by U.S.I.

To Make Sweeter Sugar

A plant is now being built to manufacture a sugar claimed to be one and one-half times sweeter than either cane sugar or beet sugar, it was announced recently. This super-sweet sugar is reported to come from the carbohydrates of the Jerusalem Artichoke, a plant native to the state of Washington.

Victims of starvation whose digestive systems can no longer handle a square meal are speeded on their way to recovery by new therapeutic uses of amino acids. Methionine is one of these amino acids.

THE MONTH IN COSMETICS

Experiments show that cold permanent wave solutions may be applied safely to unbroken human skin for as long as 24 hours . . . A new sunray protective agent is developed in Italy . . . A British scientist invents a substitute for hard vegetable waxes such as carnauba and candelilla . . . Lipstick which will not bleed, sweat or crumble even under sub-zero or humid tropical conditions is announced . . . A report on the comparative efficiency of commercial wetting agents is made . . . Myosinine is identified as the agreeable odor of cigar smoke . . . New glycerin substitutes, called alrohydrines, are now offered by an Eastern company . . . A new mechanical, dustless, and screenless pulverizer is placed on the market . . . A British scientist invents a method for the production of permanent lettering on soap.

Wider Methionine Use Seen As Result Of Low-Cost Synthesis

New U.S.I. Process Increases Availability of Vital Amino Acid

Increased availability of methionine, made possible by a new U.S.I. manufacturing process which slashes costs about 97 per cent, has spurred investigations into the development of new uses for this compound. Although supplies of methionine are still limited, much work is being performed in laboratories and clinics to extend the already wide applications of this vital amino acid. At the present time, major uses of methionine include the treatment of liver damage and toxic poisoning, and the fortification of oral and intravenous protein hydrolysates. Active interest in this compound as a means of enriching foodstuffs has also been shown.

Essential Amino Acid

Methionine is one of the ten amino acids considered essential for the growth and repair of animal tissue. In addition, it has proved successful in the therapy of liver damage, and promises great things, in combination with other amino acids, in the treatment of burns, shock, exposure, and poisoning. It has also been employed to enrich protein hydrolysates—those "predigested proteins" which have had dramatic success in the treatment of peptic ulcers and in the cure of near-fatal starvation cases.

Was Once Rare Chemical

Although some of the therapeutic applications of this compound have been known for some time, physicians could take little advantage of them, because up to the present,

(*Continued on next page*)

New Reagent Simplifies Vitamin A Determinations

The accurate estimation of Vitamin A in blood serum, fish oils, and pharmaceutical products may now become a simple routine procedure because of the availability of a new colorimetric reagent, it was announced recently. This new reagent, a derivative of glycerol dichlorhydrin, is said to develop a color with Vitamin A which is stable for at least eight minutes, permitting its absorption to be determined with extreme accuracy. In contrast, previous methods, using antimony trichloride, produce a color so transient that its absorption must be read in four seconds. This new reagent is claimed to be stable, non-toxic, and non-corrosive.

Chemistry As a Profession

What the chemist or would-be chemist may expect from his profession is the subject of a 20-page booklet published recently. The types of employment available and the training required are among the many topics discussed.

U.S.I. Is Forty Years Old

THE FIRST U.S.I. AD—In 1908, when this ad was published, U. S. Industrial Chemicals, Inc., then known as U. S. Industrial Alcohol Co., was two years old. At that time, the company was concerned primarily with the production of ethyl alcohol for industrial purposes. Since then, U.S.I. has expanded its activities into the manufacture of a wide range of other chemicals. Today, as U.S.I. celebrates its fortieth anniversary, it is producing solvents, resins, plasticizing agents, feed concentrates, and other basic chemicals which have become vital in the protective coatings, automotive, petroleum, drug, cosmetic, food, tobacco, and other industries, as well as in hospital and scientific institutions.

SUBURBAN LIFE

An Unusual Offer

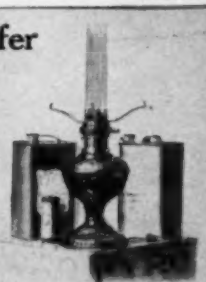
This Handsome Embossed

BRASS LAMP

and a month's supply of

PYRO DENATURED ALCOHOL

For **$5.75**



U. S. INDUSTRIAL ALCOHOL CO., 29 Platt Street, New York City

ADVERTISEMENT—*This entire page is a paid advertisement.*

October ★ **U.S.I. CHEMICAL NEWS** ★ 1946

Water-Soluble Cellulose Derivative Has Many Uses

A new water-soluble cellulose derivative, said to be used as a film-forming material, sizing agent, binder, thickening agent, preservative colloid in aqueous solutions, and as an adhesive for paper and textiles, is now on the market. It is described as white or slightly yellow flakes, which are odorless, tasteless, and non-toxic. This compound keeps for an unlimited time in clean, stainless containers, and is resistant to frost, heat, fats, oils, and alkalis, according to the manufacturer. It is reported to be manufactured by treating high alpha wood pulp with a mixture of etherifying agents.

U.S.I. Booklets Available

Products of U.S.I.—a new descriptive folder listing U.S.I. products and their more common uses may now be obtained without charge by writing to the nearest district office of U.S.I.

U.S.I. in The World of Chemistry—a 48-page booklet describing the use of U.S.I. chemicals in modern industry. Requests for copies should be sent to the New York Office of U.S.I.

New Rubber Preservatives

New chemicals, said to be effective in concentrations as low as one part in 100,000 by weight, are claimed to inhibit the deterioration of rubber, according to a patent issued recently. The chemicals are described as metallic complexes of phthalocyanines.

Methionine

(*Continued from preceding page*)

methionine has been considered one of the rare organic chemicals. It was available only in minute quantities and at costs of several hundred dollars a pound. The new U.S.I. low-cost synthesis now makes possible the use of this essential amino acid for much-needed clinical applications as well as for experimental purposes.

New Chemical Process Speeds Lumber Drying

A process which dries lumber four times faster than kiln drying is claimed by a Western lumber company. Wood dried by this process is reported to be free of pitch, and to have a lighter and more natural color with minimum warping. Acetone is the principal chemical used in extracting water from the wood, according to the inventors. Solvent recovery is said to be as high as 99.5 per cent.

Extends Visual Limits

New equipment which, when added to an ordinary light microscope, extends the range of human vision far beyond present limits has been announced recently. The converted instrument, called a phase microscope, permits the observation and study of many living cells, tissues, microorganisms and industrial materials so transparent that heretofore little or no detail could be seen in them.

New Beilstein Available

The latest edition of Beilstein's "Handbuch der Organischen Chemie," for many years the leading reference book in its field, has arrived in this country recently. It is available in a micro-film edition.

"Hey, Joe, I've done it! A non-metallic metal!"
Courtesy Materials and Methods

TECHNICAL DEVELOPMENTS

Further information on these items may be obtained by writing to U.S.I.

To eliminate windshield fogging and icing, a new development has been announced, described as a permanent, transparent coating applicable on plate glass, laminated safety glass, and multiple-glazed units. **(No. 116)**

USI

A new synthetic dispersing agent, said to be useful in producing pitch and other types of dispersions, is claimed to increase the fluidity of clay in concentrations of less than one in 100. **(No. 117)**

USI

Two new rust inhibitors are reported to prevent rust even when metal materials are in constant contact with brine solutions. **(No. 118)**

USI

A new absorbent is claimed to absorb from 120 to 140 per cent of its own weight of oil, grease, and water. **(No. 119)**

USI

To waterproof walls or floors, a new preparation has been developed which can be applied like paint, the manufacturer states. It is claimed to provide a smooth, hard, washable, and grime-resistant finish. **(No. 120)**

USI

A new insulating material, claimed to be as good as cork board, is reported to weigh only 1/10 as much as cork board and to be less expensive. **(No. 121)**

USI

To remove all types of stains is the purpose of a new line of chemicals, claimed to clean fabrics of rust, paint, glue, shoe polish, lipstick, nail polish, oils, and other hard-to-remove substances. **(No. 122)**

USI

Two new-type humidity indicators are now on the market. One is described as sensitive labels, smaller than postage stamps, which change color reversibly with the humidity. The other is an ink which may be painted or sprayed on all types of material and which is said to behave in the same way. **(No. 123)**

USI

To solve algebraic problems quickly, a new desk calculator is now being marketed which can provide the answer to as many as twelve linear simultaneous equations automatically, the manufacturer claims. **(No. 124)**

USI

A new-type maximum-minimum thermometer is stated to show high or low points during a given period by means of a single pointer instead of the usual complicated apparatus. **(No. 125)**

USI

To clean incrusted cement and concrete from tools, equipment, and forms is the purpose of a new substance, described as a clear, almost odorless, non-flammable liquid, harmless to metal and wood. **(No. 126)**

USI

To dye thermoplastics, a new solution has been developed which can be used at room temperatures according to the manufacturer. **(No. 127)**

U.S.I INDUSTRIAL CHEMICALS, INC.

60 EAST 42ND ST., NEW YORK 17, N. Y. U.S.I. BRANCHES IN ALL PRINCIPAL CITIES

ALCOHOLS
Amyl Alcohol
Butanol (Normal Butyl Alcohol)
Fusel Oil—Refined

Ethanol (Ethyl Alcohol)
Specially Denatured—all regular and anhydrous formulas
Completely Denatured—all regular and anhydrous formulas
Pure—190 proof, C.P. 96% Absolute
*Super Pyro Anti-freeze
*Solox proprietary Solvent

***ANSOLS**
Ansol M
Ansol PR

*Registered Trade Mark

ACETIC ESTERS
Amyl Acetate
Butyl Acetate
Ethyl Acetate

OXALIC ESTERS
Dibutyl Oxalate
Diethyl Oxalate

PHTHALIC ESTERS
Diamyl Phthalate
Dibutyl Phthalate
Diethyl Phthalate

OTHER ESTERS
*Diatol
Diethyl Carbonate
Ethyl Chloroformate
Ethyl Formate

INTERMEDIATES
Acetoacetanilide
Acetoacet-ortho-anisidide
Acetoacet-ortho-chloranilide
Acetoacet-ortho-toluidide
Acetoacet-para-chloranilide
Alpha-acetylbutyrolactone
5-Chloro-2-pentanone
5-Diethylamino-2-pentanone
Ethyl Acetoacetate
Ethyl Benzoylacetate
Ethyl Alpha-Oxalpropionate
Ethyl Sodium Oxalacetate
Methyl Cyclopropyl Ketone

ETHERS
Ethyl Ether
Ethyl Ether Absolute—A.C.S.

FEED CONCENTRATES
*Curbay B-G
*Curbay Special Liquid
*Vacatone 40 *Riboflavin Concentrates

ACETONE
Chemically Pure

RESINS
Ester Gums—all types
Congo Gums—raw, fused & esterified
*Aroplaz—alkyds and allied materials
*Arofene—pure phenolics
*Arochem—modified types
Natural Resins—all standard grades

OTHER PRODUCTS
Collodions
Ethylene
Ethylene Glycol
Urethan
Nitrocellulose Solutions
dl-Methionine

Printed in U.S.A.

Commercial Solvents Changes

Expansion of the research and development department and the creation of a technical development division has been announced by Commercial Sol-

T. S. CARSWELL

vents Corp. The changes within the organization are designed to keep the company abreast of technological developments and to assist in pointing the way to new projects which may be of interest to the company.

Kenneth H. Hoover, vice president in charge of research and development, announces that T. S. Carswell, formerly with Monsanto Chemical Co., has joined the company as manager of the research and development department. Dr. Paul W. Bachman has been appointed manager of the new Technical

DR. PAUL BACHMAN

development division. Director of research is Dr. Jerome Martin and patent counsel is Frank M. Crawford.

Mr. Carswell has been investigating the Argentine chemical industry for the foreign department of Monsanto Chemical Co. He joined Monsanto in 1926 as a member of its research staff, later becoming development engineer. For two years prior to 1946 he served as special representative of the Monsanto executive committee in charge of the I. F. Laucke Co.

Dr. Bachman came to Commercial Solvents in 1942 as assistant director of research. Previously he was associated with Du Pont, Victor Chemical Works and General Chemical Co.

Nyal Appoints Pearman

J. F. Pearman has been appointed as Nyal Co., representative in the central and upper Michigan territory. Mr. Pearman joins Nyal after twenty years experience selling Nyal products in retail drug stores. He replaces George Kidd, recently assigned to the territory, who was unable to find a home for his family.

United Rexall Buys Lane Stores

United-Rexall Drug Co., has announced the purchase of the common stock of Lane Drug Stores, Inc., Atlanta, Ga. H. C. Naylor, president of the Lane chain since its inception 14 years ago, will remain in complete charge of operations. The transaction involves 58 stores operating in Georgia, Alabama, Tennessee, Florida and South Carolina.

Norwich Appoints Galloway on Coast

A. J. Galloway has been appointed assistant manager of the Pacific Coast division for the Norwich Pharmacal Co. In his new capacity, Mr. Galloway will assist John J. Kassenbrock in the sales supervision for the West Coast.

Mr. Galloway has had a diversified sales experience with Norwich which well qualifies him for his new position. He was chain store representative in Chicago and later Oklahoma City for the company before entering the Navy in 1943. He spent three years in the service and since his discharge, prior to his recent appointment he has been doing special sales work for the company in the New England area.

Dr. Ward—Cutter Medical Director

Dr. Walter E. Ward, formerly an assistant professor in medical bacteriology at the University of Southern California, has succeeded Dr. Harry E. Foster, who retires after serving for 36 years as medical director of Cutter Laboratories, Berkeley, Cal.

Dr. Ward, who received his Ph.D. from Chicago University and his M.D. from U.S.C., was also director of the communicable disease laboratory at the Los Angeles General Hospital and has done extensive research in various fields of bacteriology.

Dr. Foster is well-known in medical circles for his work on diphtheria antitoxin and rabies vaccine. He also did important research with smallpox vaccine, which Cutter has been producing

DR. WALTER E. WARD

since 1903 from a strain descended from the original Jenner stock. Dr. Foster plans to spend his well earned vacation engaged in his favorite hobby—trout fishing.

Carroll Joins Sharp & Dohme

John S. Zinsser, president of Sharp & Dohme Inc., has appointed Edward J. Carroll as director of the company's new Economic Research Division. Mr. Carroll brings to Sharp & Dohme a wide experience in economic research, as well as broad practical experience in the field of drug merchandising gained through

E. J. CARROLL

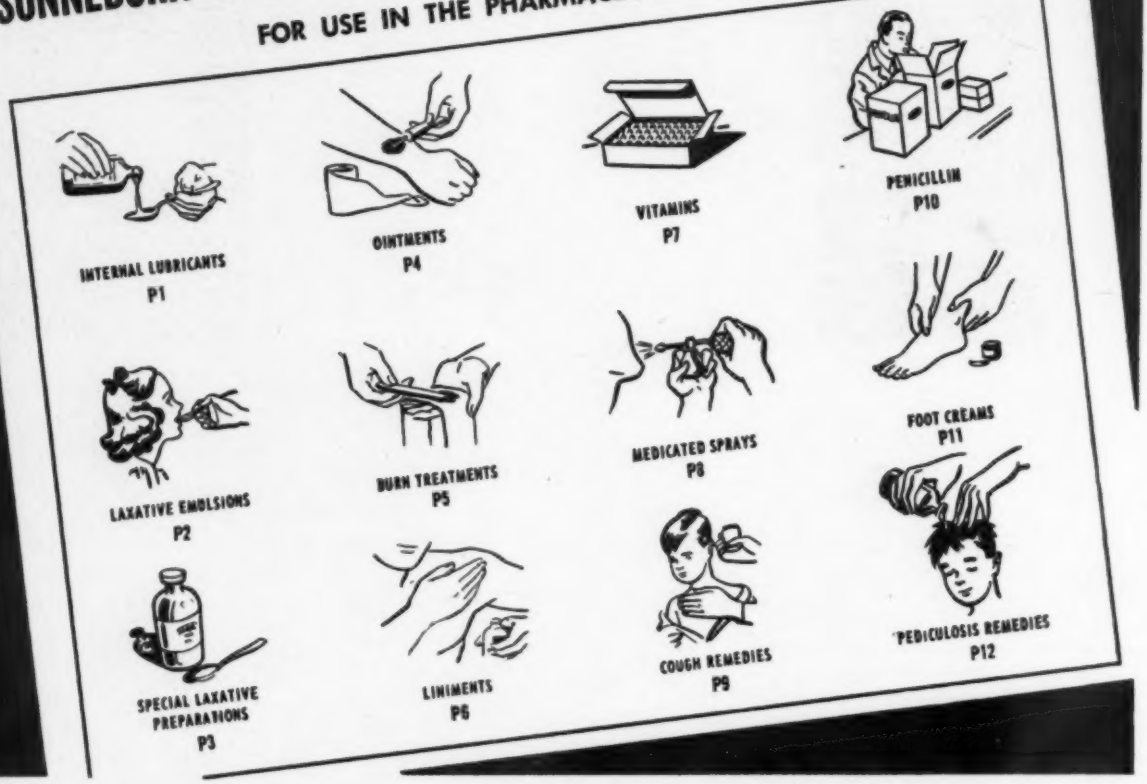
many years of association with the drug industry.

Most recently employed by the Curtis Publishing Co., as research analyst in charge of the drug and medical professions, Mr. Carroll was previously a professor of marketing and economics at American University, Washington, D.C. He was in charge of the wholesale phase of the St. Louis Drug Store survey conducted by the U. S. Dept. of Commerce from 1930 to 1934, and served as assistant to the president of Davis Brothers, wholesale druggists in Denver.

LATEST INFORMATION ON

SONNEBORN White Oils, Petrolatums and Petroleum Specialties

FOR USE IN THE PHARMACEUTICAL FIELD



Leading pharmaceutical manufacturers have long standardized on SONNEBORN White Oils, Petrolatums and Petroleum Specialties . . . convincing evidence of the unsurpassed Quality, Purity and Stability of these highly refined ingredients, a few typical end-uses of which are shown above.

The broad research facilities of the SONNEBORN laboratories, backed by 65 years of refining experience, are available for aid in solving current production problems and in the development of new pharmaceuticals.

Check the coupon (marking appropriate key letters) to receive free technical data on subjects of most immediate interest to you.

White Oil and Petrolatum Division—**L. SONNEBORN SONS, INC.**
Dept. DC10, 88 Lexington Avenue, New York 16, N. Y.

Please send latest technical data on Sonneborn products for end-uses checked (refer to illustrations for key letters):

P1 P2 P3 P4 P5 P6 P7 P8 P9 P10 P11 P12

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WHITE MINERAL OILS

KAYDOL — U. S. P. Heavy
ORZOL — U. S. P. Heavy
PROTOL — U. S. P. Heavy
ERVOL — U. S. P. Light
BLANDOL — U. S. P. Light
CARNATION • KLEAROL

PETROLATUMS U.S.P.

TYPE I: Medium Consistency — White Protopet — Yellow Protopet and other colors
TYPE II: Soft Consistency — White Fonoline — Yellow Fonoline
TYPE III: Medium Consistency with High Melting Point — White Perfecta

SPECIALTIES

SONO-JELL—Complete series for ointments, etc.
DEO-BASE — Light hydrocarbon distillate refined to complete freedom from kerosene odor
TRI-OL — Base for soap-sensitive skin cleansers

WHITE OIL AND PETROLATUM DIVISION

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88 LEXINGTON AVENUE, NEW YORK 16, N. Y.

Refineries: Petrolia and Franklin, Pa. • *Branch Offices:* Chicago, Baltimore, Philadelphia and Los Angeles • Stocks carried in principal cities.

In the Southwest: Sonneborn Bros., Dallas 1, Texas

Blankenship Joins Bristol Labs.

William M. Blankenship has been selected as assistant sales manager of Bristol Laboratories, Inc. Previously Mr. Blankenship served as general sales

W. M. BLANKENSHIP

manager for the Drug Products Co., Inc. He is a native of Virginia and attended North Carolina State College and the New York University School of Law.

Earlier business connections included International Business Machines Corp., and the Mathieson Alkali Works, where he was eastern divisional supervisor, prior to a period of service in the Army.

Mallinckrodt Rx Calculator

The new Mallinckrodt Rx calculator, designed by the Mallinckrodt Chemical Works, to simplify and shorten mathematical calculation in drug stores, adapts the slide rule technique to the requirements of the pharmacist, is now available.

Three windows on the face show the conversion of liquid measures—apothecary to metric and vice versa. A fourth window gives the pharmacist with a flick of the finger, unit cost and profit margin on dozen and case lots.

Four windows on the reverse side show conversion of dry measures of the two systems. In addition two tables show percentages of solutions made by either system. The Rx calculator will be gratis on request to retail pharmacists who place with their wholesalers minimum orders of $5.00 for Mallinckrodt prescription chemicals.

Correction

A typographical error was made in the August issue about Henri L. Robert. It was not in 1945, as we stated, that Mr. Robert came to the United States, but rather in 1941, following his honorable discharge from the French Army.

Boyle & Co. Promotes Research

Boyle & Co., donated $3,000 to the White Memorial Hospital and the Institute of Experimental Medicine connected with the hospital to promote research in their laboratories.

The main fields of endeavor toward which this grant is to be directed are: virus diseases, development of amino acid for human use, allergies and expanded application of vitamins and germicides.

Rigaud Appoints Varin V.P.

Roger E. Varin has been named first vice president and managing director for Etablissements Rigaud Inc. For the past six years Mr. Varin was head of the export division of Coty, Inc. At the same time the company announced that, as of September 1, it will assume sole distribution of its perfume and toilet preparations, terminating its previous arrangement with E. Fougera & Co.

W. J. Schieffelin III to Wed

William J. Schieffelin 3rd, descendant of John Jay, Commodore Vanderbilt and Jacob Schieffelin, founder of Schieffelin & Co., is engaged to marry Joy W. Proctor, daughter of Mr. and Mrs. William Ross Proctor of New York.

Mr. Schieffelin left Yale in 1942 to enter the army. He served in the Burma campaigns of Mars Task Force as executive officer, B Battery, 612 F.A. He is finishing his studies at Yale.

Dr. Reifenstein Joins Ayerst, McKenna

Dr. Edward C. Reifenstein, Jr., an associate of Dr. Fuller Albright in internal medicine and endocrinology at

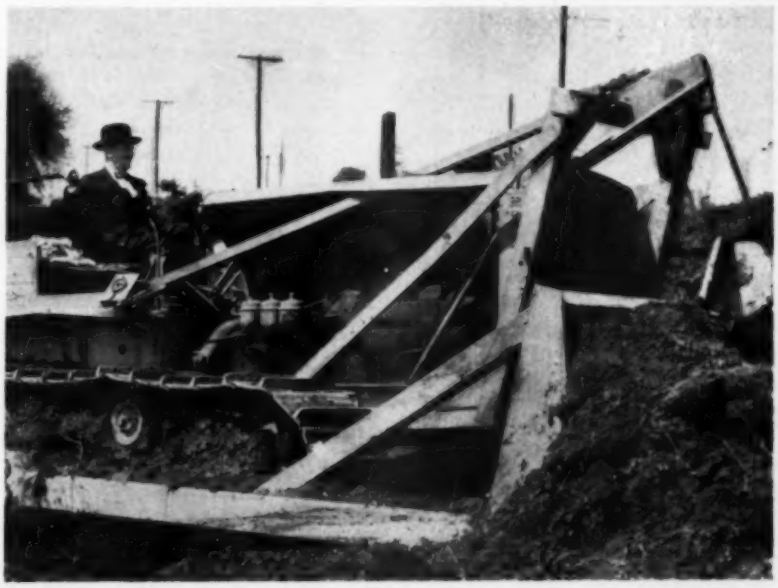
DR. E. REIFENSTEIN, JR.

Massachusetts General Hospital, Boston, has accepted an appointment on the staff of Ayerst, McKenna & Harrison Ltd. He assumed his new duties on September 15, at the New York offices, 22 E. 42 St.

Dr. Reifenstein is a graduate of Syracuse University 1934, and is the son of Dr. E. C. Reifenstein, Sr., emeritus professor of medicine, Syracuse University College of Medicine.

International Packaging Changes Name

International Packaging Co., has changed its name to National Home Products Co., Inc.



William L. Schultz, president of Shulton Inc., is shown on a bull-dozer during the ground breaking ceremonies for the new plant at Clifton, N. J., being erected by the company as part of its expansion program.

Vreeland Rejoins Grove

Russell E. Vreeland, for thirteen years general sales manager of Grove Laboratories, Inc., has been appointed vice president in charge of sales and advertising and elected a director of the company.

RUSSELL VREELAND

Mr. Vreeland resigned from Grove in 1945 at a time when James H. Grove, now chairman of the board and president, was in the Navy.

Until he was invited to return by Mr. Grove, Mr. Vreeland established and directed his own sales agency in Toronto, offering service in Canada to manufacturers in the drug and cosmetic field.

Rock Snow Retirement Party

A group of friends of R. K. Snow of the Dow Chemical Co., gathered recently at the Detroit Athletic Club, to give him a retirement party, commemorating his twenty-seven years with the company. While Mr. Snow's activities were largely centered in the midwest, he did cover the entire United States while with Dow Chemical.

Gillis Joins Monsanto

John L. Gillis, vice president of Johnson & Johnson International, New Brunswick, N. J., joined Monsanto Chemical Co., on October 1.

Mr. Gillis, a native of St. Louis, was formerly connected with the Monsanto foreign department, having left in 1944 to go with Johnson & Johnson.

Norwich Expanding

Construction has been started on the first two units in a building program which will ultimately give the Norwich Pharmacal Co., more than 650,000 square feet in a single integrated plant.

M. C. Eaton, president and general manager of the company, said that work on the five story administration building, and a five-story extension to the manufacturing and packaging building are proceeding, following approval by the Civilian Production Administration. A total of 235,000 square feet will be provided in these buildings.

The buildings will be of welded steel frame construction with exterior of face brick and limestone. The present administrative building, will be revamped for use as the company's sales offices. A scientific building is planned for the future and will adjoin the executive tower.

Payne Joins Florasynth

Florasynth Laboratories, Inc., have announced that Arch Payne of Arlington, Texas, is now head of their Dallas office, located in the Hagar building, 1708½ Commerce St.

Mr. Payne has been associated with

ARCH PAYNE

oil and chemical organizations in an executive capacity since 1919. He was born in Liverpool and attended schools in England and the United States, leaving the University of South Dakota to join the U. S. Army during the first World War.

Myers Joins Purepac

Charles R. Meyers has joined the Purepac Corp., as vice president in charge of the firm's mid-western division. He will manage twenty mid-western sales territories, and will make his headquarters in the Purepac Chicago manufacturing laboratories.

Mr. Meyers resigned as manager of the wholesale drug division of Magnus, Mabee & Reynard to accept the Purepac post. He has previously been a sales executive with the William S. Merrell Co., and with Merck & Co.

Sydney L. Baron recently returned from military service, has been appointed advertising manager of the Purepac Corp. He had prior to his association with the company been with the Fashion Advertising Agency, and with the Willard B. Golvin Inc., advertising agency.

Another change in the executive personnel of the Purepac Corp., is the appointment of Warren A. King, as assistant to Claude S. Welton, executive vice president. He will assist in management of sales and promotion for the firm's manufacturing laboratories in New York, Chicago and Los Angeles.

Mr. King was formerly with the United Air Lines as manager of light industrial accounts in the airlines sales traffic department.

Campana Appoints Clymer and Gates

The appointment of William B. Clymer and Robert A. Gates as regional sales directors of Campana Sales Co., Batavia, Ill. has been announced by I. Willard Crull, president.

Mr. Clymer served for three years with the U. S. Navy in the South Pacific and was executive officer of Great Lakes. Prior to the war he was with the Lambert Pharmacal Co., and before that associated with Park and Tilford. He will supervise sales in the Southwest and the West central territories.

Mr. Gates was formerly associated with the Elias Shaker Co. He will supervise sales in the East central territory.

Ortho Advances Powell

Ortho announces the appointment of Edward B. Powell as manager of sales-

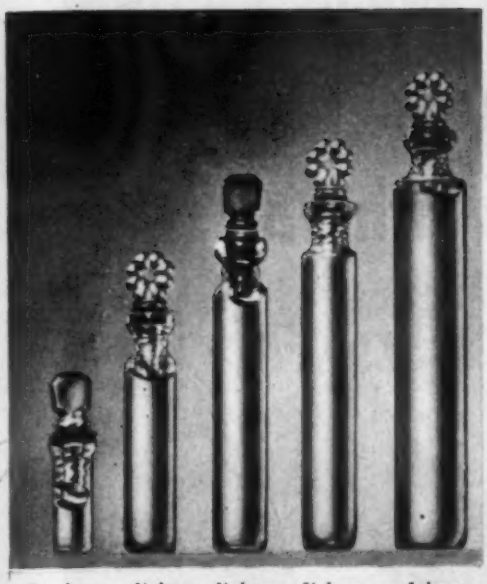
EDWARD B. POWELL

men. Mr. Powell was formerly manager of Ortho's Pacific Coast division with headquarters in San Francisco. Prior to that time, he represented Ortho Pharmaceutical Corp., in New Mexico, West Texas and Los Angeles territories.

For that costly look

New hand-blown crystal glass vials

Emphasizing the impression of costliness by their very simplicity, their delicacy and small size, these new vials lend true distinction to your perfumes. Hand-blown of clear crystal glass, their individuality may be further enhanced by the use of decorative stopper-applicators . . . made conveniently *interchangable.* All GII styles and designs are patented. Investigate them today!



Few drops ¼ dram ½ dram ¾ dram 1 dram

1 ounce ½ ounce 3 drams

2 drams 1½ drams 1 dram

LOOK! This is Glass Industries' patented, exclusive leak-proof, air-tight stopper-applicator. Also available in beautiful floral designs made of tiny hand-painted shells.

GII

GLASS INDUSTRIES INCORPORATED

DESIGNERS MANUFACTURERS

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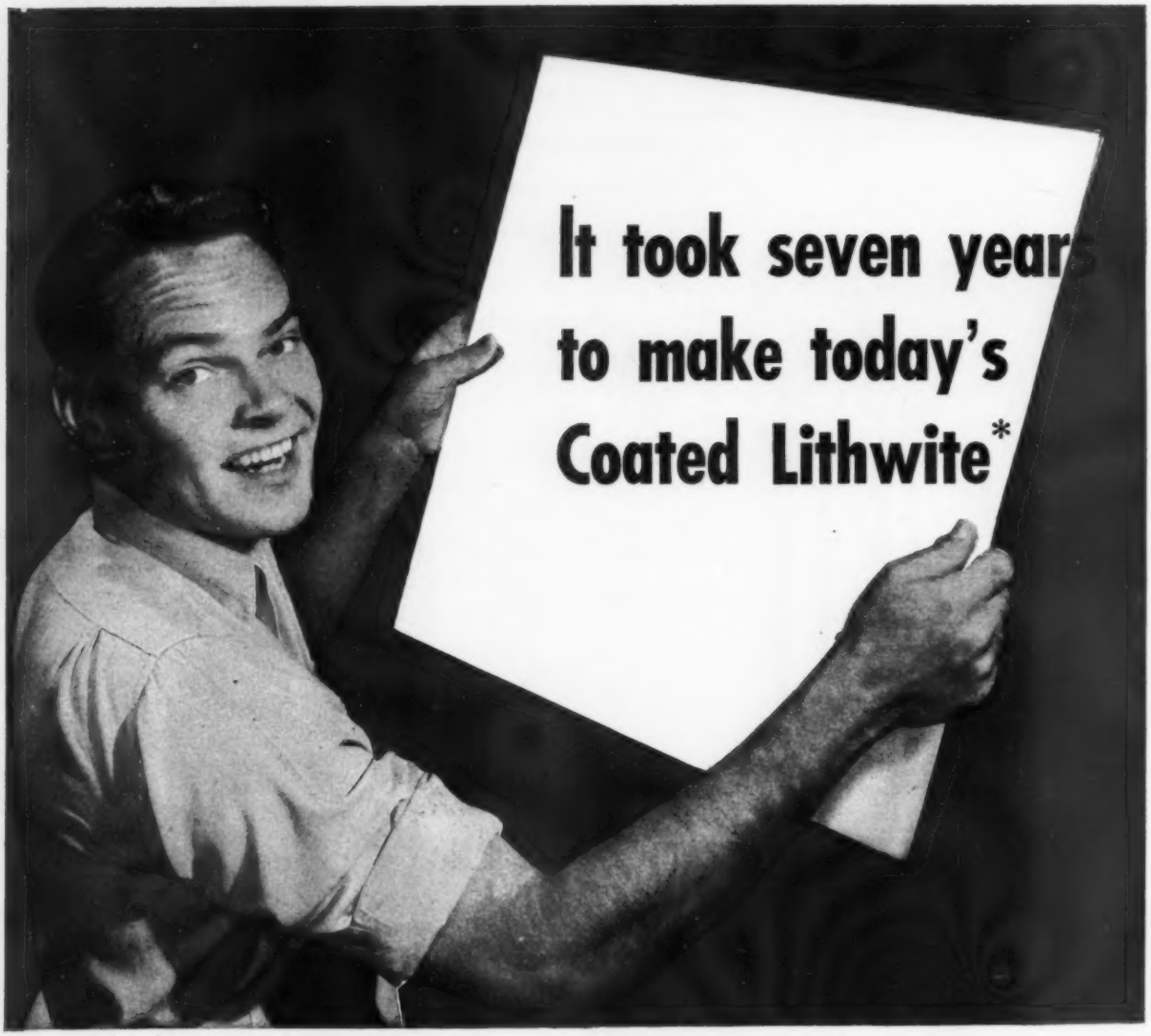
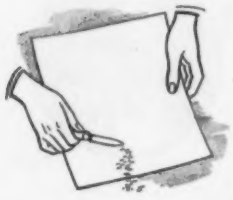


This revolutionary *clay-coated* paperboard reached its present high point of performance through 7 straight years of pioneering and development

Coated Lithwite has been tested and developed by Gardner-Richardson over a seven-year proving ground. Behind it is experience measured in hundreds of millions of cartons. And it's experience that shows on the surface . . . in brightness and velvety feel . . . in the brilliant way it prints . . . in the sure way it folds, tucks or bends without shattering.

To leading carton users, *Coated* Lithwite is a known quality. But *quantity* has not been great enough to meet carton buyers' needs. A project is under way now to increase the volume of *Coated* Lithwite, as well as the range of sizes. How soon? A matter of months, but alert carton buyers will inquire about *Coated* Lithwite for their cartons much sooner—probably today.



Always "up to scratch." Take your knife and scratch the surface of Coated Lithwite. Notice the fine, powdery white coating that fluffs off. *Coated* Lithwite is *clay-coated* . . . has a surface that's uniform, hard, yet free from "chalkiness."

The GARDNER-RICHARDSON Co.

Manufacturers of Folding Cartons and Boxboard

Middletown, Ohio

*Reg. U.S. Pat. Off.

Sales Representatives in Boston • Chicago • Cleveland • Detroit • New York • Philadelphia • Pittsburgh • St. Louis

Commercial Appoints Ticknor

William D. Ticknor, Jr., has been appointed manager of the export division of Commercial Solvents Corp., with headquarters in New York.

W. D. TICKNOR, JR.

Since returning in February of this year from overseas where he was with the Office of Strategic Services during the war, Mr. Ticknor has been assistant to the vice president in charge of sales. A graduate of Harvard in 1930, he became associated with Commercial Solvents in 1936.

Brown Directs Bathasweet

Elmer H. Bobst, president of William R. Warner & Co., Inc., has appointed Douglas Brown as executive vice president of Bathasweet Corp., with headquarters at 1911 Park Ave., New York. Mr. Brown was formerly with the Industrial Vitamin Division of Hoffmann-La Roche, Nutley, N. J.

Para Ti Changes

John Lahoud, president of the Para Ti Corp., makers of Tuya perfumes and toiletries, has announced several important changes of policy and personnel as the first in a broad expansion plan.

Blaine Faber, formerly advertising and sales director, resigned his position as advertising manager and will now devote his entire time to his duties as sales director and will assume the new job of secretary of the company.

P. Wesley Combs, partner in the Radco Inc., advertising agency, has been appointed to the post of vice president of Para Ti while retaining his partnership in Radco Inc. He brings to the company a broad knowledge and many years experience in the merchandising and advertising fields.

Radco Inc., has resigned the Para Ti account, which will now be handled by Hal A. Salzman Associates. Mr. Lahoud gave no reason for the change.

Redigen Endorsed

Robert W. Terry, laboratory director of The Columbus Vaccine Co., announced that the Bureau of Animal Industry at Washington had pronounced "Redigen" to be "a uniform and satisfactory diagnostic for pullorum disease in chickens." Following this endorsement, Redigen was voted as an official test by state representatives of the National Poultry Improvement Plan meeting in St. Louis. Redigen has received widespread use among American and Canadian hatcherymen.

Interesting highlights in the manufacture and clinical use of intravenous protein hydrolysate solutions were broadcast during the 4th National Chemicals Exposition. Left to right, Dr. D. V. Frost, Abbott Labs.; Wayne Griffin, ABC announcer; R. R. Buswell and H. C. Spruth also of Abbott Labs.

Dr. Peterson Joins J. T. Baker

Dr. Joseph R. Stevens, director of the organic research division of the J. T. Baker Chemical Co., has appointed Dr. Willard D. Peterson, associate director of this division. He will be concerned with the development phase of this program.

DR. W. D. PETERSON

Dr. Peterson formerly did administrative work in research and development at the central research Labs., of the General Aniline and Film Corp.

After obtaining his B.S. at Iowa State and his Ph.D. at Harvard, Dr. Peterson worked for many years in the synthetic organic chemicals department of Eastman Kodak Co., and subsequently did development work on dye components for use in the Kadachrome process.

Fiedler Aids Dinner to Jolson

Joining colleagues in the various amusement fields, the toilet goods industry participated in a testimonial dinner honoring Al Jolson, at the Astor Hotel, October 1.

The toilet goods industry representative on the sponsoring committee of the dinner was J. George Fiedler, president of Kelton Cosmetics, also chairman of the American Veterans Committee, arrangements committee.

The AVC commendation, described Jolson as an "outstanding friend of the service man," as a result of his many tours with the USO throughout the various theatres of the war.

Clough on Gillette Board

At a recent meeting, the board of directors of Gillette Safety Razor Co., elected S. DeWitt Clough, a director of the company.

Mr. Clough is chairman of the board of Abbott Labs., of Chicago, with which company he has been associated since 1903.

SEE THIS FIRST DISPLAY

BEGINNING NOV. 1ST

Kono-Mead

HIGH SPEED
BAG-MAKING MACHINES

NOW READY FOR DELIVERY

Beginning Nov. 1st we will exhibit at our Flushing, L. I. headquarters the amazing high-speed electronically controlled bag-making machines which produce heat-sealed bags with glue reinforcements at the rate of 5,000 to 12,000 bags per hour—with only one operator!

These high-output, low-cost bag-makers are coming off the assembly line daily. Come and see them in operation. If you wish, you may place your order at the exhibit.

NOTIFY US AT ONCE IF YOU WISH HOTEL RESERVATIONS.

KONO-MEAD EQUIPMENT CORPORATION

133-23 35th AVENUE • FLUSHING, LONG ISLAND, N. Y. • TEL. FL. 3-8113

N.W.D.A. Educates Retailers

In a move designed to counteract mounting competition to retail drug stores from so-called super-markets and other sources, the National Wholesale Druggists' Association is mailing to all active members and to deans of accredited schools of pharmacies a "Teachers' Manual for Drug Store Management."

The manual was prepared for the association by Herman C. Nolen and Harold H. Maynard, professor of marketing, Ohio State University, in collaboration with Edward E. Garrison, assistant professor of marketing, University of Tennessee. It is to be used in conjunction with "Drug Store Management," written by the same authors.

Wholesale drug houses that are active NWDA members are being urged to form local classes of retailers in store management problems, using the manual and the book to guide them.

Teachers of the course are asked to emphasize the point that the druggist is "in competition with other merchants and that if he is to prosper, he will have to raise his merchandising standards."

Among the 30 chapters of the book covered by the Teachers' Manual are "Pharmacy as a Career," "Drug Store Planning and Layout," "Pricing to Yield a Profit," "Sales Promotion," Developing Professional Business," "Merchandising," "Selecting, Training and Supervising Employees," "Special Laws Effecting Drug Stores."

Name Changed to Royal Pharmacal Corp.

The Royal Manufacturing Co. of Duquesne, Pa., has changed its corporate name to Royal Pharmacal Corporation. The firm has appointed William H. Johns as Eastern divisional sales manager, with headquarters in the general office in Brooklyn, and transferred John H. Albert from the Buffalo territory to Duquesne where he is now the Central division sales manager. Harry Shultz, formerly with Purepac Corp., was made Midwestern division sales manager.

Sasmor—V. Vivaudou Sales Manager

Louis Sasmor, has been appointed sales manager of V. Vivaudou, Inc., a division of Universal Laboratories. In the cosmetic and drug business for thirty years, Mr. Sasmor has been affiliated with Vivaudou since 1934.

H. Henry Bertram

H. Henry Bertram, sixty, vice-president and store manager of Frederick Loeser & Co., Brooklyn, and president of A. P. Babcock Co., manufacturing perfumers, died at his summer home September 23.

H. HENRY BERTRAM

He took over the running of the department store in 1938 five years after entering it as an assistant toilet goods buyer. He had headed the cosmetics firm since 1932, when he was also president of the American Manufacturers' of Toilet Articles.

Mr. Bertram saw service as a cavalryman in the Mexican Border trouble of 1916, and during the first world war he served in Washington in the Motor Transport Service. He was called to duty and served in the recent war as a Lt. Colonel, assistant chief of staff of military intelligence in the New Jersey State Guard.

Surviving are two sons, Edward R. and H. Henry Bertram Jr.,

Abbott Defends Hykinone Patent

The U. S. District Court for the Northern district of Illinois, Eastern division, Chicago, sustained U. S. Letters Patent 2,367,302 owned by Abbott Labs., covering such bisulfite derivatives of 2-methyl-1, 4-naphthoquinone as Hykinone.

The decision came in a lawsuit involving patent infringement brought by Abbott Labs., in which it was charged that M. G. Farnsworth, had been making products and using processes, covered by this patent since it was issued January 16, 1946.

In the final judgment by consent, the court enjoined, as of October 1, 1946, M. G. Farnsworth and agents from making, using, selling or employing the processes covered by the North Chicago firm's patent.

Penicillin Plant in Sweden

Alexander Redniss, president of Technical Enterprises Inc., New York, announced that his company was awarded a contract for the construction of a pencillin plant in Sweden. Pilot plant production is expected to commence early this winter. The main plant will be ready for operation in the spring of 1947. The design of this plant will incorporate the best features of modern construction methods. Export handling has been arranged through Commodities and Chemicals Corp.

Dr. Clark Leaves Macy's

Dr. Ralph W. Clark, buyer of pharmaceutical products for Macy's, New York, has resigned to accept an appointment of full professorship in the School of Pharmacy at the University of Kansas.

Dr. Clark's purchasing duties will be taken over by Samuel Knox, department manager of drugs at Macy's.

Atomizing Container

Carolus Fortier, 635 Ave., Querbes, Montreal 8, Canada, who has the patent on a non-refillable, self-atomizing perfume container, under the trade-name of Charmeuse, would like to tie-in with an enterprising party of proven integrity and business ability (company or individual) and one preferably with experience in the cosmetic field to manufacture and market it in the United States.

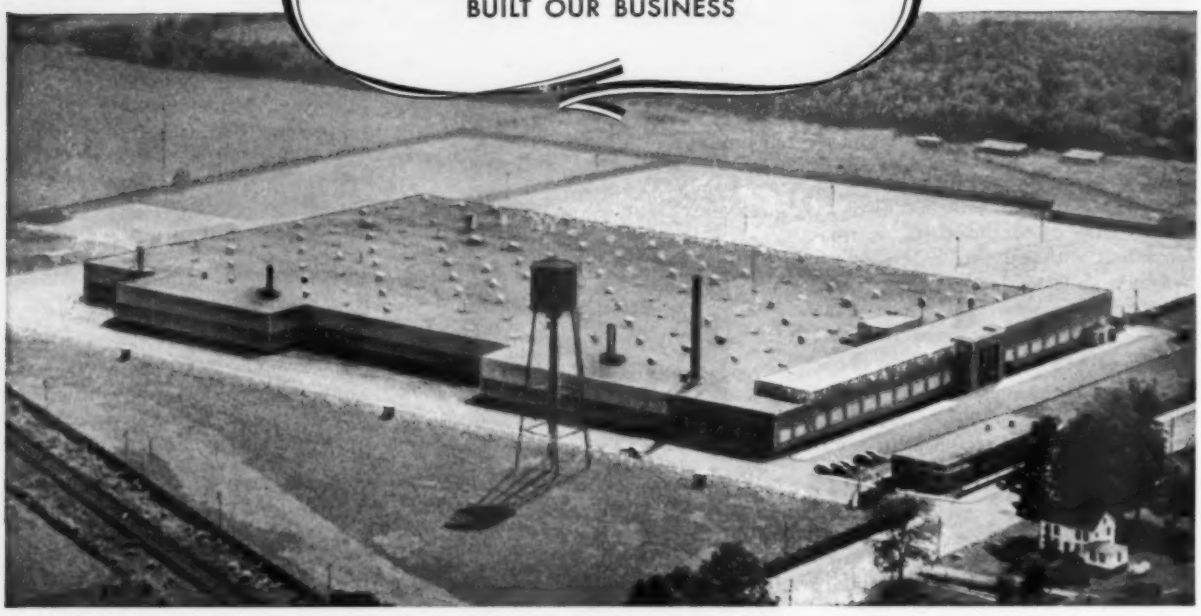
Pierre Danco

Pierre Danco, 75, vice president of Gerard J. Danco Inc., and Gerard J. Danco International Corp., died September 18, at his home, 418 Central Ave., Orange, N. J. He suffered from a heart attack several weeks ago and had been bedridden ever since.

Born in Antwerp, Belgium, in 1871, Mr. Danco was a pioneer of the Belgian Congo which he first visited in 1893 as private secretary to the Governor General. He was a prominent figure in the Belgian colony in New York and was a knight of the Order of Leopold II, the Order of the Crown and the State of the Belgian Congo.

Surviving are his wife, two sons, Leon A. Danco, of Fairfield, Conn., Gerard J. Danco of Morristown, N. J., and two daughters, Mrs. Elisabeth Magerman and Miss Suzanne Danco of Brussels, Belgium.

SOLVING OUR CUSTOMERS' PROBLEMS
BUILT OUR BUSINESS



New Plant of the Package Machinery Company

361,000 square feet of floor space . . . 40 acres of land

This new plant at East Longmeadow, just outside the city of Springfield, when in full operation, will enable us to greatly increase our output of wrapping machines.

Production will continue in our present plant while the machines and equipment are being installed in the new plant.

Our offices will be located on the first floor of the front section. The Engineering Department will occupy the entire upper floor.

With manufacturing operations all on one vast floor, efficiency will be greatly increased, and working conditions will be more pleasant for our craftsmen. All of which will result in still better service for our customers.

We deeply appreciate the fact that our steady growth over the past 33 years is due to the confidence placed in us by the packaging industry. And you can be sure that we will continue to do everything possible to retain that goodwill by endeavoring to make our services of increasing value.

PACKAGE MACHINERY COMPANY, Springfield 7, Massachusetts

30 Church St., New York 7 • 111 W. Washington St., Chicago 2
101 W. Prospect Ave., Cleveland 15 • 849 Marietta St., N.W., Atlanta 3 • 443 S. San Pedro St., Los Angeles 13
320 Market St., San Francisco 11 • 18 Dickens Ave., Toronto 8

Production Forum

By Francis Chilson

Industrial Consultant

Labor Relations

Last month I outlined a program for labor relations in the drug and cosmetic industry and in discussing it with some of the boys, the question was raised as to how such a program should be put into effect. Obviously, it should not be put into effect in one fell swoop. "Eaten bread is soon forgotten." No matter how much you do for people, they shortly get accustomed to it, and then expect more. So, in setting up such a program, if the company decided to adopt all the recommended practices, including retirement plans, bonus incentives, based on company earnings (which incidentally I neglected to mention last month), it would be desirable to take only one major step at a time. Thus, if a particular company instituted a guaranteed annual wage, this would be sufficient for at least a year—possibly two. Then an earnings sharing plan might be adopted as a further stimulant to morale and general efficiency and so on.

I think a program such as I have outlined should take a period of five years, insofar as its major elements are concerned. It goes without saying, of course, that all the trivial things should be done at once, such as providing clean wash rooms, cloak rooms, and the like.

Now, along with establishing a fair, broad visioned labor relations program, I think every company should adopt a policy of not employing strikers from other plants. Right now we have the anomalous situation in which manufacturers are financing strikes by employing strikers from other plants on a temporary basis. As a matter of fact, in some areas, selfish, short-sighted, manufacturers have done everything possible to entice workers of struck plants to join up with them, even though they know in the majority of cases these workers will quit when the strike is settled and return to their former employment—especially if the strike is won.

It seems to me that if workers want to indulge in the expensive practice of striking, they should finance themselves and be cut off from all other employment while the strike is in progress. I would go so far as to say that the Wagner act should be amended to make it illegal for anyone to employ a striker unless that striker resigns from the struck organization before the formal strike has occurred.

The Wagner act should also be amended to prohibit all organizational, jurisdictional, and sympathetic strikes. While I don't like any kind of strike, and although I feel that labor disputes can be settled without strikes, nevertheless, there are a few occasions when employers are so stupid and blind to their own interests, that a strike might be justifiable, but a strike without a good reason is never justifiable.

While the suggestions I have made in this and in previous discussions on the subject may not provide the answers to the labor relations problem, there is one answer which I think all will accept, and that is "a house divided against itself cannot stand." And if you don't like the medicine I've prescribed, what have you to offer as an alternative?

Profit Motive

I think we should stop preaching so much about the profit motive as the sole mainspring of the capitalist system. So much shouting has been done about the profit motive that we have deliberately played into the hands of the Communists and other subversive organizations by creating the impression that Capital is utterly selfish and that its only reason for existence is to create profits for capitalists and that if this motive is taken away, the whole structure of the free enterprises system will come tumbling down.

The stimulating force of the profit motive alone has been grossly exaggerated. Most of the men I know, whether they are laborers in factories, or whether they are general managers, are working simply to hold their jobs. The only time I have ever seen managers greatly concerned with the profit motive was when the periodic financial statements were in and scrutinized to deter-

Try "SLUGGING" OR PRECOMPRESSING

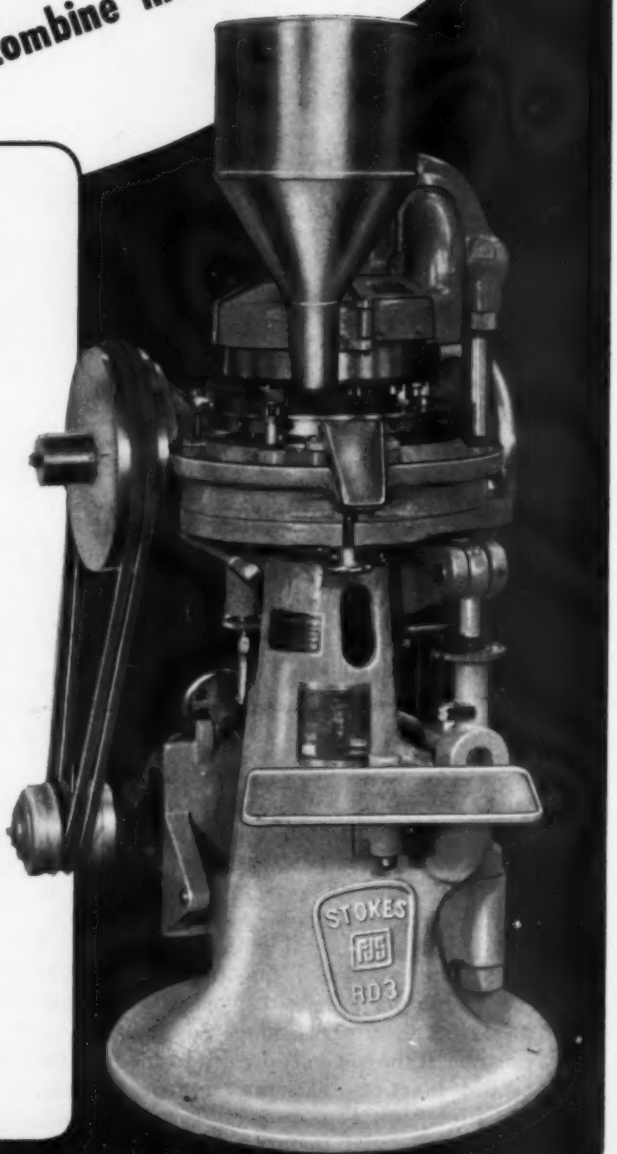
to combine incompatible materials

Your Stokes D-3 Rotary Tablet Machines are ideal equipment for preparing granulations by the "slugging" method . . . often the best, in many cases the only satisfactory method, because it eliminates wet mixing and drying, simplifies the problem of combining incompatible materials and is successfully used in handling heat- and moisture-sensitive and other troublesome formulas.

Your D-3 machines were developed especially for handling fine powders, are heavy and rugged, have a variable speed drive that makes quickly available the most efficient operating speeds for making both "slugs" and finished tablets. They are equipped with our patented Excess Pressure Release to prevent possible damage in precompressing operations.

For further information on precompressing methods or other help on tabletting or preparation of materials or care of machines, write us. Ask for booklet "Tips", to help prolong the life of punches and dies and tablet machines.

F. J. STOKES MACHINE COMPANY
5932 Tabor Road Olney P. O. Phila. 20, Pa.



F.J.Stokes TABLET MACHINES PHARMACEUTICAL EQUIPMENT FJS Est 1895

mine whether or not they did succeed in producing profit during a given period.

But in the larger sense, the fact that men will work only for the profits does not withstand historical scrutiny. The really great contributions to society were utterly removed from the profit motive. This is true of all the great discoveries in every branch of science. It is true of the creation of all of the great contribution in painting, sculpture and music. It is true also of the religious professions, the poets, the philosophers and the writers, whose ideas—quite apart from any profit motive—sooner or later influence the world to an enormous degree.

Consider how the writing and thinking of two poverty stricken writers, Marx and Engels, brought Communism into the world. Consider how the writing of Nietzsche eventually brought Nazism into the world. Consider how the ideas of Aristotle have dominated Christian thought for two thousand years. None of these men were writing for profits, and each of them has hand an enormous influence, good or bad, on part or all of the world.

In our own time, it is impossible to think of men like Einstein or Nils Bohr, Fleming, or Madam Cure as being interested in the profits of their work in the slightest degree.

Men will work for praise, for glory, for honor, for intellectual satisfaction, for power, just as hard, or even harder than they will work for profits.

Consider the record of our own industry during the war. Hundreds of millions of dollars of merchandise were turned out for the armed forces, and the amount of profit gained thereon was so negligible as to be insignificant. Here and there there may have been a few chislers and profiteers, but by and large, the industry should be commended for its altruistic effort in behalf of victory. I know of one instance where, on a volume of business of ten millions dollar in war contracts, the net profit was less than $200,000.00, and this was turned back to the government in the form of taxes. Certainly we have proof in our own industry that during the war, when there was something bigger than capitalism to think about, industry worked together, not because of, but in spite of the profit motive.

When an ideal bigger than self is provided, men will work as diligently for it as they ever did for profit.

I think the ideal in our free enterprise system should be that we are working to support the families of all our people. A man who owns a business employing, for example, 30 married men should realize that he is supporting 30 families. Their physical and spiritual welfare should be as of much concern to him as though they were actually related by ties of blood.

Profit is not the only mainspring of the capitalistic enterprise. Profit is often incidental. There are a lot of corporations in this country which operate on profit margins so narrow that they might be said to be operated entirely in the interests of their employees and the public. The Telephone Company is a good example, the insurance companies are good examples, and there are a number of public utility companies which continue to operate in the service of the public even though they are unable to pay their stockholders any dividends whatsoever on a regular basis.' They shouldn't operate this way, of course, but the cases are cited merely to show that there often are many instances where services are rendered to the public on a basis which makes profit impossible.

So, I think if our trade associations and our prominent business men will stop bellowing in the press and over the radio about the profit motive, and concentrate more on the constructive contributions of industry, the capitalist system will be rendered less vulnerable to attack by the destroyers.

Call it by any name you will, Capitalism is the core of society and no society can exist without it. Regardless of what label is applied to a given society, there always will be rich men and poor men and middle class men. The chief distinguishing mark of our own society is the size of the middle class in relation to the other two classes of society. In Russia, the word Capitalism is abhorrent, but there are hundreds of thousands of Russians who are enjoying the possessions and prerogatives that rich men enjoy in this country. I think we should be a lot less concerned with labels and name calling. All of us who believe with heart and soul in the free enterprise system should work together to make it work to the fullest extent for the most people.

The Antis

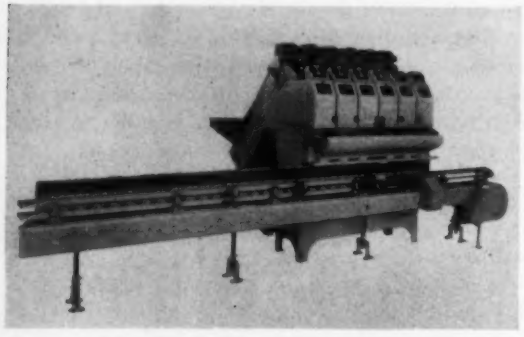
It is comforting to know that some "*goddam*" fools still exist to lend color and variety to living. There are people in this world who would allow human beings to die—possibly in agony—in order that animals might not be injured. Recently, I laid out a couple of laboratories in different towns, and in both I was required to conceal the animal rooms so that the townspeople and the ordinary employees wouldn't discover that we were using animals for clinical purposes.

In one town, the anti-vivisectionists are so strong that if it were discovered by these moronic sentimentalists that we were using animals for laboratory purposes, it would be easily possible for any of the members of that fat-headed society to get an injunction against us to prevent the practice. In the other case, the company was not worried about the local townspeople because the laboratory was sufficiently far from town to make it relatively safe, but the management was worried about *its own* factory and office employees, many of whom were known to be anti-vivisectionists. Can you beat that? My reaction was that if they didn't like to work in a place where animals were used for research purposes for the benefit of mankind, they should get the hell out and work in the local tannery. Pretty soon we will have unions in which the outlawing of anti-vivisectionist practices will be a requirement.

The following information is supplied by manufacturers of the equipment described and claims made below by these manufacturers are passed along for what they are worth. Presentation of such notice in this department is not to be taken as endorsement of the claims or of the equipment.

Improved Weigher Filler

An improved line of automatic and semi-automatic machines for weighing and filling dry products into containers has been announced by the Triangle Package Machinery Company, 906 North Spaulding Avenue, Chicago 51. Identified as Triangle Model A Elec-Tri-Pak Vibratory Feed Weighers, these machines provide 25% to 50% faster packaging and greater accuracies than earlier models. Production ranges from 15 or 20 packages per minute to as high as 120, depending upon the style of machine and the product being packaged. Typical products packaged on this equipment include: beans, peas, rice, crackers, cookies, candies, coffee, marshmallows, potato chips, granules, coarse bath salts, cut macaroni products, grocery staples, pretzels, cranberries, etc.



Weighing and discharging of materials is automatic. When filling paper or cellophane bags, an operator is required to place each bag on the filling spout, after which no further attention is required. After the bag is filled it is automatically released onto a conveyor and carried to the closing machine.

In the case of rigid containers, fully automatic operation can be obtained. Cartons, cans, or jars are carried by conveyor to the weighing machine where they are filled, after which they are conveyed to closing machines.

The operating principle of the machines is unique. Material to be packaged is discharged by electrically vibrated feed plates into a power-rotated weighing receptacle which discharge into the container as soon as the load reaches correct weight.

The speed of the feeding trays is regulated by dials on top of the machine. These are set within limits to prevent the operator from speeding up the machine at the expense of accuracy. Some models will weigh from as little as ¾ oz. up to 8 oz. Other range from 1 oz. to 1 lb. and 4 oz. to 5 lbs. Adjustments for various weights are readily made on a scale mechanism and a new precision Acro-Meter adjustment control is provided for making minor weight variations while the machine is in operation. Elec-Tri-Pak weighers are claimed to deliver weights from exact to a small fraction of an ounce plus or minus.

A screening device takes out crumbs and fine particles so that they do not get into the package. The mechanisms are completely enclosed in cabinets for cleanliness and protection of working parts.

Another new feature of the weighers is known as Visual Weighing. This is an automatic light signal system which indicates the sequence of weighing operations and serves as a warning in the event of irregularities that might influence weighing accuracies.

Package Unit Demineralizer

A line of four package unit demineralizers for providing industrially pure water at the fraction of distillation costs has been announced by Cochrane Corporation, Philadelphia. The units are designated by reaction tank diameters as the CDM-12 (12″ diam. reaction tank), CDM-18, CDM-24 and CDM-36. The units are designed for plug-in operation from any convenient 110-v, 60 cycle source and are attractively finished along the lines of modern refrigerators and other household appliances. Units are constructed so that all steps of operation are performed and all results observed from a position in front of the panel. Chemical tanks are also charged from this position making the unit suitable for location against a wall or in a corner. All control valves and instruments are located on the panel at eye level. Various reaction materials are applicable to particular condition and those best fitting raw water and effluent requirements are used. Write Cochrane Corporation, 17th Street and Allegheny Avenue, Philadelphia 32, Pennsylvania, for a copy of Publ. 4266 describing the Cochrane Model CDM package—unit demineralizers.

New Weston Thermometer

A new all-metal thermometer known as the Max-Min, which indicates the maximum or minimum temperatures reached, has been introduced by the Weston Electrical Instrument Corporation, Newark, New Jersey.

Similar in other respects to the standard Weston all-metal thermometer, the new Max-Min, has an auxiliary red index which is manually set by a finger knob which protrudes from the center of the scale glass (as illustrated).

When a record of the lowest temperature reached is desired, this index is placed to the low side of the temperature pointer. The pointer will move the index to the lowest temperature reached during any operating period, and the index will remain at that low point until manually reset. For a record of the highest temperature reached, the index is simply set at the high side of the pointer.

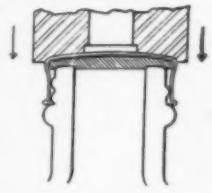
● For the last word in sealing efficiency, we give you Turret-Top the Turtle. He's fully protected, but opens up easily when it's time for him to get under way. And his reclosure feature comes in mighty handy, too.

There is one advantage we haven't been able to steal from Turret-Top for our Alseco R-O's—they aren't exactly self-opening. But a twist of the wrist does it.

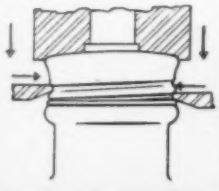
The unique Alseco R-O principle *rolls-on* the threads while the cap is held down on the bottle lip. This gives a tight, efficient seal that prevents leakers and breathers; eliminates evaporation.

Our 32 years of experience in making seals probably holds an answer to your sealing problem. Write to ALUMINUM SEAL COMPANY, New Kensington, Pa.

THIS WORKS BEST WITH ALUMINUM



1. Plain-skirted Alseco Seal is seated squarely on container. Under stationary top pressure, container lip is embedded in cap liner evenly all around, effecting the seal.



2. While the seal is thus held under pressure, threads are Rolled-On to conform exactly with threads on container. Each seal is tailor-made, fits perfectly, seals tighter.

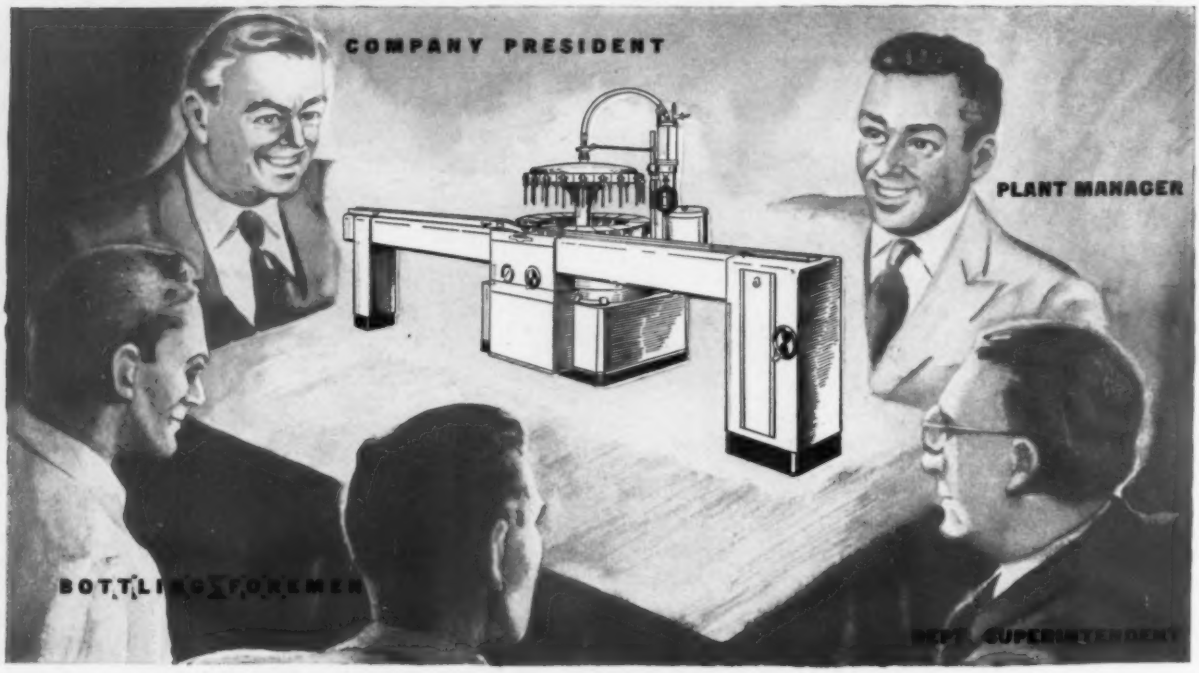
ALSECO SEALS AND SEALING MACHINES

TAILOR-MADE OF ALCOA ALUMINUM

ALUMINUM SEAL COMPANY • NEW KENSINGTON, PENNSYLVANIA

SUBSIDIARY OF ALUMINUM COMPANY OF AMERICA — SALES OFFICES IN LEADING CITIES

Why, gentlemen, we all agree . . . .



. . . we know we want a machine that will fill all liquids faster and more efficiently.

. . . we know we want a machine that will do a job day after day, every day!

. . . we know we want a machine that's just as good, just as reliable as the ones we've been using all these years, which means we all agree on a

KIEFER AUTOMATIC ROTARY VACUUM FILLING MACHINE

It pays for itself in a hurry; how much of a hurry depends on the particular filling speed of your light, heavy, foamy or syrupy products.

Completely automatic, semi-automatic, hand-fed equipment to clean, fill, close, convey jars, bottles, tins, collapsible tubes.

●

Also

Filters Pumps

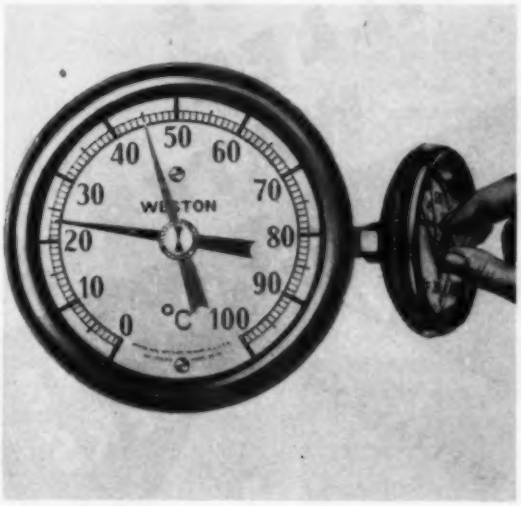
The Karl Kiefer Machine Co.

Cincinnati, U.S.A.

New York
Boston
Chicago
Baltimore

San Francisco
Seattle
Los Angeles
London, England

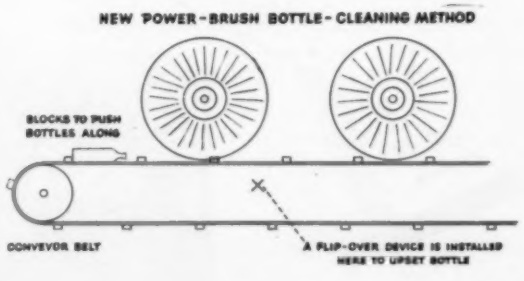
This new Max-Min carries the same accuracy guarantee as the standard Weston thermometers. It is now available in two models, 221M and 222M, with scale diameters of three and five inches respectively. It is also available in all the usual Weston ranges, and in stem lengths from two and one-half to 18 inches.



It is claimed that this thermometer fills the need for a low-cost device which will provide an accurate record of high or low temperatures, such as on transformers, sterilizers, ovens, chemical equipment, etc., as well as in many processing operations throughout industry. Complete information is available from Weston.

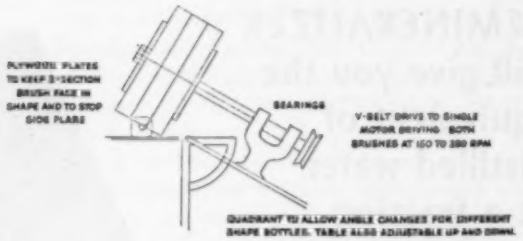
Bottle Cleaning Apparatus

A power-brushing operation that eliminates hand cleaning of bottles during the packaging of pharmaceutical products, promises widespread application in many phases of the bottling industry, effecting both cost and time savings, according to officials of the Osborn Manufacturing Company of Cleveland, world's largest producer of power brushes for industry.


NEW POWER-BRUSH BOTTLE-CLEANING METHOD
BLOCKS TO PUSH BOTTLES ALONG
CONVEYOR BELT
A FLIP-OVER DEVICE IS INSTALLED HERE TO UPSET BOTTLE

The original application being employed on an aspirin bottling operation by a large pharmaceutical manufacturer has eliminated a hand-cleaning procedure which had been standard practice for many years as a means of removing dust and other foreign material on bottles during the filling operation and prior to packing.

This method employed for this operation (as illustrated in Fig. 1) is to mount on a stationary conveyor belt two 3-section 11-inch horsehair brushing wheels which are similar in shape to Osborn's Ringlock Fascut

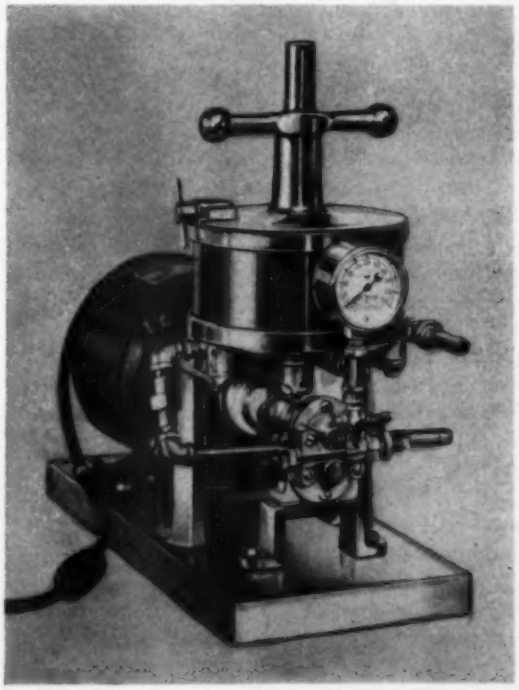

PLYWOOD PLATES TO KEEP 3-SECTION BRUSH FACE IN SHAPE AND TO STOP SIDE FLARE
BEARINGS
V-BELT DRIVE TO SINGLE MOTOR DRIVING BOTH BRUSHES AT 150 TO 250 RPM
QUADRANT TO ALLOW ANGLE CHANGES FOR DIFFERENT SHAPE BOTTLES. TABLE ALSO ADJUSTABLE UP AND DOWN.

sections. These have a 4¼-inch inside diameter and are mounted to a V-belt drive (as shown in Fig. 2), operating at between 150 to 250 revolutions per minute. A quadrant allows for angle changes for different bottle shapes and the installation is mounted on a table which is adjustable up and down. Plywood face plates keep the brush face in shape and stop side flare.

The conveyor belt is equipped with wooden blocks to push the bottle along and a flip-over mechanism is installed between the two brushing setups to upset the bottle midway through the cleaning operation.

Filter

The Alsop Engineering Corporation announces a new Bench type filter incorporating many post war features.



IF YOU USE DISTILLED WATER

The COCHRANE DEMINERALIZER will give you the equivalent of distilled water at a fraction of the cost...

COCHRANE

A new self-contained unit with reaction tanks, chemical tanks, special piping and all necessary fittings. Only ordinary piping and electrical connections needed to install. Write for a copy of Publication 4181 and details of the new Model CDM Unit.

COCHRANE CORPORATION
3102 North 17th Street
Philadelphia 32, Pa.

It was especially designed for light manufacturing or pilot plant work.

It is of the "Sealed-Disc" type using asbestos discs which can be supplied in eight different grades for coarse or ultra-fine filtration.

The filter is completely enclosed, preventing loss of liquid by dripping or evaporation, and so designed that when the handle on top is removed the entire filter can be taken apart for easy cleaning.

This model shown which has a positive pressure rotary pump is made with capacities from one to six gallons per minute and with filtration areas of from 40 to 1200 square inches.

When liquid contains abrasives, carbon, filter aids, or acids an Alsop Centri-poise pump can be used and all parts touching liquid can be made of stainless steel, monel metal, bronze, iron, etc.

The outstanding feature is the very large filtering capacity due to the unique arrangement of the filter discs which gives the greatest possible filtration area in the smallest space making this the most compact unit yet designed. A folder will be gladly sent to those interested.

Correction

In the September issue an oversight occurred in connection with a straight line bottle filling machine, in which the manufacturer's name was omitted. The machine in question is manufactured by the Perl-Oussani Machine Mfg. Co., 68 Jay St,, Brooklyn, N. Y.

A New Trade Mark Law

(*Continued from page 489*)

Section 33 provides:

> "Sec. 33. (a) Any certificate of registration issued under the Act of March 3, 1881, or the Act of February 20, 1905, or of a mark registered on the principal register provided by this Act and owned by a party to an action shall be admissible in evidence and shall be prima facie evidence of registrant's exclusive right to use the registered mark in commerce on the goods or services specified in the certificate subject to any conditions or limitations stated therein, but shall not preclude an opposing party from proving any legal or equitable defense or defect which might have been asserted if such mark had not been registered."

and Section 49 provides:

> "Sec. 49. Nothing herein shall adversely affect the rights or the enforcement of rights in marks acquired in good faith prior to the effective date of this Act."

It is, therefore, evident that the advantages of the new Act will largely apply to marks registered or re-registered after July 5, 1947. The prior user is limited in his clains as will be seen from Section 33, paragraph 5, which provides:

> "(5) That the mark whose use by a party is charged as an infringement was adopted without knowledge of the registrant's prior use and has been continuously used by such party or those in privity with him from a date prior to the publication of the registered mark under subsection (a) or (c) of section 12 of this Act: PROVIDED, HOWEVER, That this defense or defect shall apply only for the area in which such continuous prior use is proved."

5. Abandonment—For the first time in this Act we have a legal definition of "abandonment" which has hitherto been the cause of much litigation. Section 45 of the Act provides:

> "A mark shall be deemed to be 'abandoned'—
>
> (a) When its use has been discontinued with intent not to resume. Intent not to resume may be inferred from circumstances. Non-use for two consecutive years shall be prima facie abandonment."

Hitherto the courts have always been liberal in construing the question of abandonment and in many cases non-use for many years has not been considered abandonment under special circumstances such as prohibition or war. Some attention must also be paid to the nature of the merchandise in considering the question of abandonment, as it should be easier to prove abandonment in the case of a candy bar or lipstick than in the case of a mark for a piano or an excavating machine. Certainly, the two year period for prima facie abandonment mentioned in the Lanham Act will receive serious consideration by the Courts.

A novel feature of the new law also is that registrations under the new Act do not remain in force for twenty years automatically, but the automatic period, so to speak, is limited to five years and an affidavit by the registrant is required after the expiration of each five year period to keep the registration in force. Section 8 (a) of the Act provides:

> "Sec. 8 (a) Each certificate of registration shall remain in force for twenty years: PROVIDED, That the registration of any mark under the provisions of this Act shall be cancelled by the Commissioner at the end of six years following its date, unless within one year next preceding the expiration of such six years the registrant shall file in the Patent Office an affidavit showing that said mark is still in use or showing that its non-use is due to special circumstances which excuse such non-use and is not due to any intention to abandon the mark. Special notice of the requirement for such affidavit shall be attached to each certificate of registration."

In substance this means that although the duration of the registration is still the same as under the present law, some affirmative action must be taken every five years to keep the registration in force.

6. Enlarged Definition of a Trade Mark—Symbols, Devices, Etc.—The new law carries this definition of a trade mark:

> "The term 'trade mark' includes any word, name, symbol or device or any combination thereof

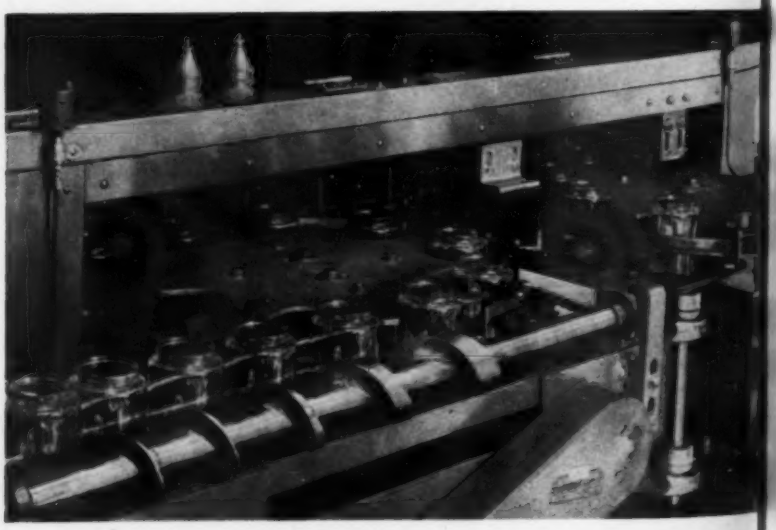
(*Continued on page 559*)

Now glass is even easier to handle

- Glass, helped to its present superiority by Hartford-Empire research and development, is further helped by these two pieces of handling equipment.
- One-trip beers, eight-paneled ketchups, baby foods — these and many other glass containers are handled with ease by the non-jamming H-E Unscrambler and the straight-line H-E Pocket Washer.

THE H-E NON-JAMMING UNSCRAMBLER

THE H-E STRAIGHT-LINE WASHER



THE UNSCRAMBLER

Points of superiority of the H-E Unscrambler include:

1. *Jamming is completely eliminated.* Even the two final jars entering the line cannot jam in the H-E Unscrambler. Continuous supply to filler is assured.

2. *Containers are handled gently, though swiftly.* The oscillating guide, an exclusive H-E feature, keeps the container mass active in slow motion, preventing damaging impacts. Yet over 300 jars are delivered per minute.

THE WASHER

Points of superiority of the H-E Pocket Washer include:

1. *Gentle, straight line washing.* Containers are handled one at a time, thus avoiding bruises—but are delivered at better than 300 per minute, when such speeds are desired.

2. *No attendant required.* This device is completely automatic.

OTHER FEATURES The flexibility, both as to speed and type of operation, of these two pieces of equipment is further described in two illustrated folders, available on request. Both machines are saving money for brewers and food packers today. Ask for the folders and learn why.

ONE REASON WHY GLASS MAKES A BETTER CONTAINER

Hartford-Empire's continuing search for better formulae, better methods and better performance centers in the experimental glass plant and complete laboratories housed at 411 Homestead Avenue, Hartford, Connecticut — just up the street from the main offices and plant.

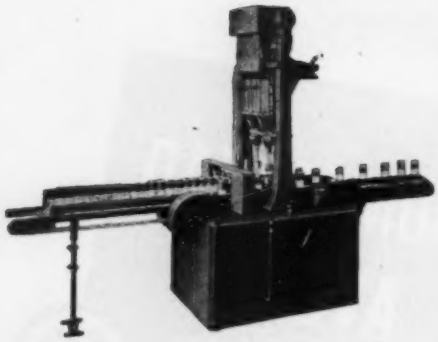
The H-E record of never being satisfied, of constant "teamwork in brainwork" for better glass containers, now goes forward to help the customers of glass container manufacturers — right now with the Pocket Washer and Unscrambler.

More will come — and it will come with a first hand understanding of packers' and bottlers' problems. From Hartford-Empire's food processing laboratory to its battery of container testing equipment, the research, development and engineering resources of this company work wholly for glass container manufacturers and their customers.

HARTFORD-EMPIRE COMPANY

HARTFORD 1, CONNECTICUT

. . . they chose US



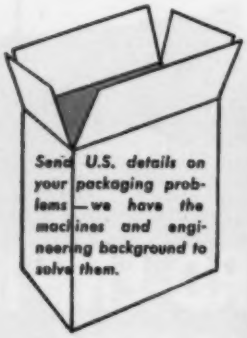
The NEW Model JK
Fully Automatic Volume Filler
Weigher or Packer

Manufacturers of the powders illustrated above economically solved their filling problems with ***U S.*** Using the new fully automatic, twin station Model JK Packer, you too can achieve dollar saving results. And operators will praise its clean, efficient operation and its many new features.

The Model JK fills with closest accuracy up to 60 containers per minute on all kinds of powdered and granular materials. Normally the operation of this automatic machine is to fill by packing under controlled pressure; for those materials that require settling rather than packing, the new vibrating filling platform is furnished.

An efficient dust collector hood at the filling stations collects any escaping particles, keeps the machine and surrounding air clean and free of annoying dustiness. This, combined with the new shut-off gates which eliminate the drip at the augers, makes the filling operation absolutely clean.

Combine the foregoing with other new features designed to provide efficiency in performance and convenience for the operator and you have a machine that is the last word in modern high-speed powder filling.



Send U.S. details on your packaging problems—we have the machines and engineering background to solve them.

US *Automatic Box Machinery Co. Inc.*

Owning and Operating

NATIONAL PACKAGING MACHINERY CO. • CARTONING MACHINERY CORP.

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LOS ANGELES (KEUSH EQUIPMENT & SUPPLY CO.)

TAKES THE WATER YOU HAVE

CATION

EXHAUSTION

$Ca(HCO_3)_2 + H_2X = CaX + 2H_2O + 2CO_2$

$MgSO_4 + H_2X = MgX + H_2SO_4$

$2NaCl + H_2X = Na_2X + 2HCl$

REGENERATION

$CaX + H_2SO_4 = H_2X + CaSO_4$

$Na_2X + H_2SO_4 = H_2X + Na_2SO_4$

ANION

EXHAUSTION

$2A + H_2SO_4 = A_2{\cdot}H_2SO_4$

$A + HCl = A{\cdot}HCl$

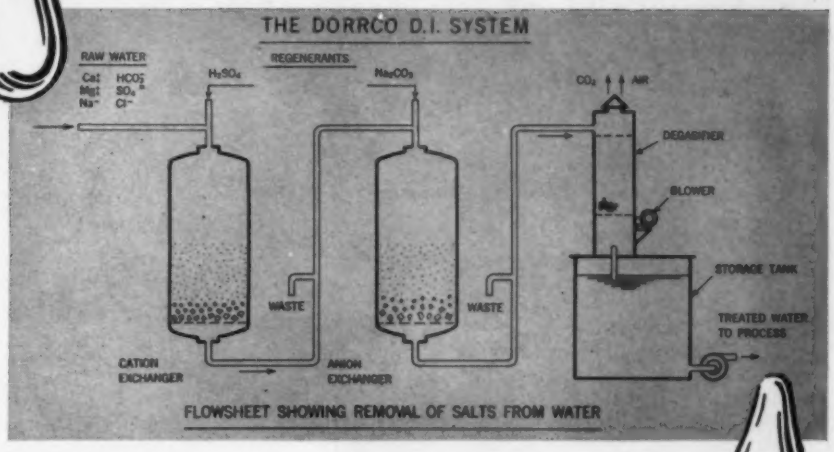
REGENERATION

$A_2{\cdot}H_2SO_4 + Na_2CO_3 = 2A + Na_2SO_4 + H_2O + CO_2$

$A{\cdot}HCl + Na_2CO_3 = A + NaCl + H_2O + CO_2$

H_2X = REGENERATED CATION

A = REGENERATED ANION



FLOWSHEET SHOWING REMOVAL OF SALTS FROM WATER

MAKES IT THE WATER YOU WANT

The equivalent of distilled water at a fraction of the cost

If you're still paying high prices for your process water, it will pay you to investigate the Dorrco De-Ionization System. It treats whatever water you have, makes it the equivalent of distilled water, for 2 to 20 cents per thousand gallons.

Operating on the principle of ion exchange, the D-I System utilizes an improved multi-stage regeneration process. This process gives you close control over water properties—gives you prescription water to meet your most exacting plant requirements. The entire system comes to you in a single, compact, self-contained unit. Write Dorr today for particulars on the D-I System.

WHAT D-I DOES

- Removes simple hardness
- Decreases Bicarbonate Alkalinity
- Reduces total solids
- Performs two-stage de-ionization with regeneration of exchangers
- Delivers capacities of 100 to 1500 gallons per hour

WHERE D-I CAN BE USED

Foods	Chemicals
Rayon	Spirits
Pulp and paper	Laboratories
Metal	Pharmaceuticals
Cosmetics	Dyes
Ceramics	Steam plants

1561

DORRCO

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ADDRESS ALL INQUIRIES TO OUR NEAREST OFFICE

Modernize with Compact ALSOP FILTERS

Their efficient operation assures an ultra fine, brilliantly polished product where ever liquids are to be clarified. You'll find one of the eight different grades of discs gives you just the right degree of fineness of filtration you require. Alsop's complete line of "*Sealed-Disc* Filters" is available in Stainless Steel, Monel Metal, Bronze or Special Alloys to meet specific conditions and at surprisingly low cost. Our Bulletin 745 gives complete details.

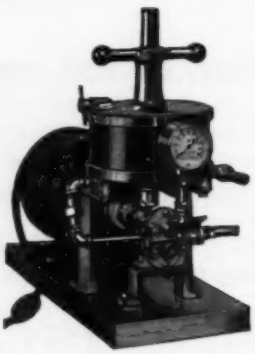
NOTE THESE FEATURES

Filter discs can be changed easily and quickly. It is just as simple to clean the entire machine for use on different liquids.

Requires exceptionally small floor space. For example, a 600 gals. per hour filter complete with motor and pump requires only a 9″ x 20″ floor space—a 2000 gals. per hour unit requires only 12″ x 24″ of floor space.

Made in sizes, with or without pumps, from 1 gallon per minute up to thousands of gallons per hour.

Being completely sealed, these filters eliminate loss of liquid through leakage or dripping or even by evaporation.



This compact, low price bench model for conveniently handling small batch work provides maximum possible flow rate with positive clarity.

OUR NEWLY ENLARGED FACTORY AND FOUNDRY

ALSOP
ENGINEERING CORPORATION
Filters · Filter Discs & Sheets · Mixers · Agitators
110 CASS STREET MILLDALE, CONNECTICUT

The bottle illustrated is A-4289 . . . an ideal selection for a liquid deodorant . . . the closure, one of our new decorative Empress line.

IT WORKS WONDERS . . .

the container that's *exactly* right for your product

A *selling* package must be suited to your product in every respect—the right size, the right shape, the right type of closure, *the right look!*

The stock Duraglas drug, chemical and toiletry line offers more than 1400 different bottles that are economical in original outlay, economical on the filling line. Among these you should find one that fills *your* product's special requirements.

Your distinctive label treatment assures your package individuality; the familiar O-I trade mark assures dependable strength, accurate capacity, long-lasting luster.

Let us help you select a Duraglas container and closure that will help to *sell* your product!

Duraglas TRADE MARK REG. U. S. PAT. OFF. CONTAINERS—Protectors of Quality

OWENS-ILLINOIS GLASS COMPANY, TOLEDO 1, OHIO Branches in Principal Cities

Quality Products DESERVE

the Finest Labeling

and the FINEST labeling is done with *lower* costs on the

PONY LABELRITE*

- Every label in *exactly* the proper place and position.
- No excess glue to wipe off.
- All edges glued down—no blisters or wrinkles. . . .

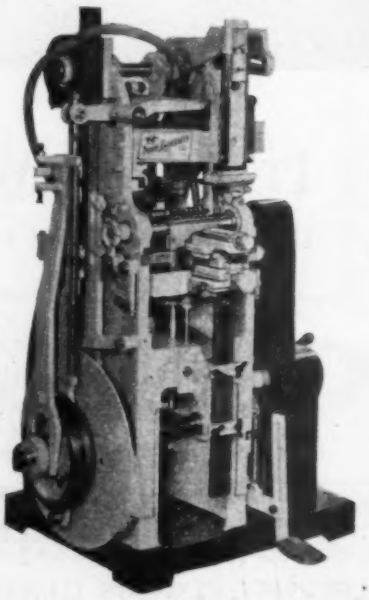
Here are 2 exclusive Features that provide better Labeling for you!

1. VACUUM LABEL FEED

Label is immovably held by vacuum, as it travels from hopper to container, across glue-roller *in a straight line.* Perfect alignment between hopper and container makes PERFECT REGISTER certain.

2. TWIN ROLLER GLUE CONTROL

Micro-film of adhesive prevents *any* excess glue on labels. Provides immaculate labeling and NO WIPING OF CONTAINERS is required.



*REG. U.S. PAT. OFF.

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NEW JERSEY MACHINE
corporation

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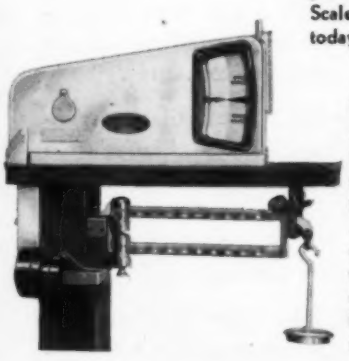
EXACT WEIGHT Shadograph packaging Strychnine Sulphate Hypodermic tablets in the First Texas Chemical Co. plant, Dallas, Texas.

Lower YOUR Tablet, Capsule Packaging Costs

What a change! "We have cut our tablet and capsule packaging costs 85% through the use of EXACT WEIGHT Scales," says one chief Chemist. No more burdensome hand counting or expensive over-packaging when you weigh on high-speed, fraction-ounce, tailored to the operation equipment. The facts are simply this: labor costs go down, operator fatigue drops . . . volume is tremendously increased. You can do the same thing . . . cut YOUR costs . . . . improve your packaging . . . . assure your profits all with EXACT WEIGHT Scales. Write for complete details today.



EXACT WEIGHT Indicating Attachments materially improve your weights... remove the human element by substituting visible weight control ...correct underweight, save over-weight . . . speed up your operation . . . transform ordinary even balance platform scales into precision units.

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THE EXACT WEIGHT SCALE COMPANY

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SEAMLESS

ONE PIECE DIE DRAWN STAINLESS STEEL

6 REASONS WHY YOU SHOULD OWN HUBBERT SEAMLESS KETTLES . .

***METHOD** . . . Hubbert's methods are the best—not the quickest or cheapest, all kettle shells being properly heat-treated and hardened and specially processed to prevent corrosion.

EFFICIENCY . . . Hubbert Kettles are efficient—heat rapidly and evenly—due to proper steam distribution.

SEAMLESS . . . All Hubbert shells are seamless. Die Drawn from one piece of material. No welds to leak or corrode.

SANITARY . . . Hubbert Kettles are completely sanitary and easy to clean and keep clean. No cracks, holes or depressions where dirt may lodge. Hard and durable. Perfectly polished.

SAFETY . . . Hubbert Kettles are heavily constructed to withstand their rated working pressure *Plus.*

QUALITY . . . Only the finest of materials, engineering and workmanship go into Hubbert Kettles—resulting in low upkeep costs.

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Improved production of fine and ultra-fine powders thru

MECHANICAL PULVERIZATION

—this new Book contains everything you want to know about pulverizing. Send for your copy today

This valuable book—soon off the press—tells you how to produce fine and ultra-fine powders; how to test the value of fine and ultra-fine grinding right in your own laboratory or pilot plant before starting full production schedules; how to control particle size, blending and dispersing, accurately; how to select the proper mechanical pulverizer for your needs; as well as many other important facts about pulverizing.

Send for this new book today and learn why it is decidedly to your advantage to use a MIKRO-PULVERIZER or one of the new MIKRO-ATOMIZERS in your pulverizing operation.

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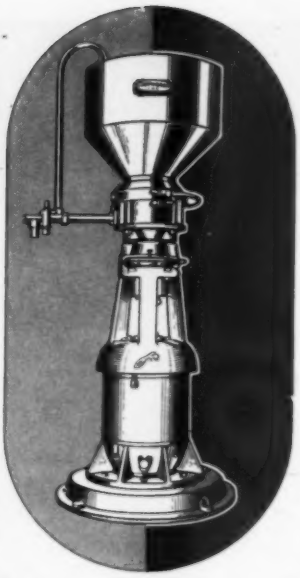

TWO PROCESSING MILLS IN ONE

1. *An Eppenbach High Speed Wet Grinding and Colloid Mill* will reduce the size of solid particles to microscopic dimensions and effect their instantaneous dispersion in fluid or plastic materials as consecutive operations in the same cycle.

2. Operation of the EPPENBACH COLLOID MILL requires neither training nor special skill—merely attention to simple directions. A calibrated dial registers adjustment of clearance between milling surfaces thus assuring higher uniformity of treatment.

EPPENBACH COLLOID MILLS are available in laboratory and production sizes. Capacities range from ½ to 3600 gallons per hour or higher. The principle of operation is the same for all sizes; therefore performance and capacity can be accurately predetermined by experiment with a laboratory unit.

EPPENBACH COLLOID MILLS can be adapted for pressure feed of viscous and semi-plastic materials. They are easy to dismantle for cleaning and sterilizing.

Write for Catalog No. 401 describing our equipment in detail.

EPPENBACH, Inc., 45-10 Vernon Blvd.
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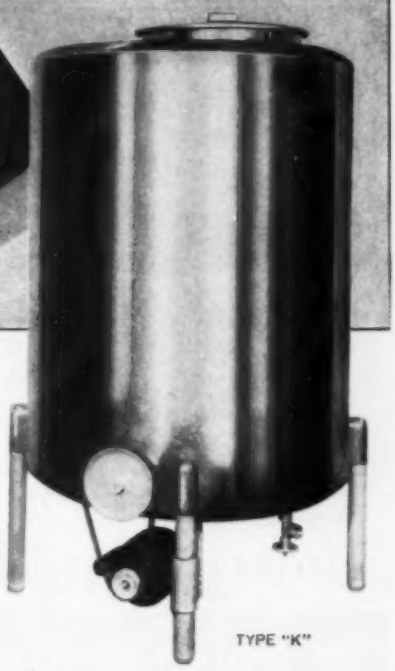
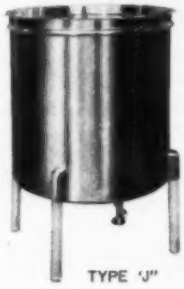
EPPENBACH INC.
Processing Equipment for Over 30 Years

Your MIXING or STORAGE PROBLEMS can be Solved with a STAINLESS STEEL SAN-I-TANK



TYPE "K"

Regardless of what your chemical storage or mixing problem is, a San-I-Tank can simplify it for you—economically and safely. All San-I-Tanks are built by tank specialists. Constructed throughout of 18-8 Stainless with all welds ground smooth and polished. Completely self-draining, sanitary and rust proof. Many extras available such as covers, motors, agitators, etc. Let our engineers give you recommendations on your tank problems.



TYPE "J"

MANY TANKS IN STOCK FOR IMMEDIATE SHIPMENT — *Tell Us Your Requirements.*

We carry a complete line of stock sizes in San-I-Tanks. If we do not have a Standard tank to fill your need our Engineering staff is at your disposal to design and build a tank best suited to your requirements. If it's a tank problem, get in touch with Metal-Glass today,—we can solve it for you.

METAL-GLASS PRODUCTS CO.
Dept. D BELDING, MICHIGAN

....LAST WORD IN "ON THE PACKAGE" PRINTING SENDS HELENA RUBINSTEIN'S "HEAVEN SENT" OUT INTO THE WORLD SELF-ASSURED AND LOVELY IN ITS PERFECTION.

SILK SCREEN PRINTERS TO THE COSMETIC FIELD
CREATIVE PRINTMAKERS, INC.
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Straight Line
Bottle Filling Machine
for
Gravity-Vacuum-Pressure
One Machine—For 3 Uses

No Dripping—Negligible Overflow—High Speed

- Universal Automatic Filling Valves
- Fills all types of solutions: free flowing—heavy—foaming
- Instant filling of liquid into bottles.
- Exact adjustment to desired height in bottle.
- All bottles filled uniformly
- For all size bottles.
- Made to meet your requirements.

Immediate Deliveries

Perl-Oussani Machine Mfg. Co.
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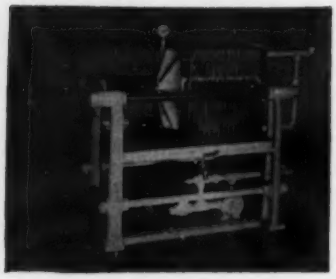


THE ERTEL "Utility" Filter

PRE-FILTRATION TO GERMPROOF & ULTRA-FILTRATION

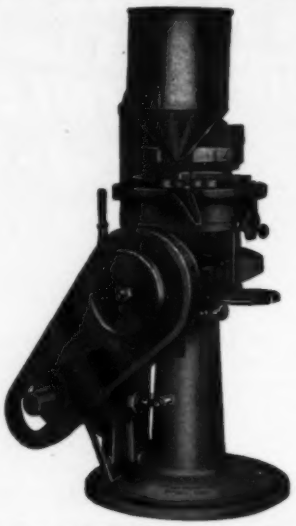
This Ertel filter is the only unit specially designed for use with any and all types of filtering mediums:

1. Ertel Neutral Asbestos Filter Sheets
2. Filter Cloth & Filter Aid
3. Filter Paper
4. Filter Cloth.

Available in sizes holding from 10 to 100 filtering surfaces. Has no rubber gaskets or washers. The Ertel single hand wheel effects a simple complete closure. Equipped with pump, motor and pressure control.

CATALOG { The fully illustrated Ertel Catalog-12 describes the complete line of Ertel Liquid Handling Equipment. Send for a copy today; no obligation of course.

ERTEL ENGINEERING CORPORATION
KINGSTON, NEW YORK
NEW YORK CITY SALES OFFICE AND SHOWROOM
50 WEST 44th STREET NEW YORK 19, N. Y.
LIQUID HANDLING EQUIPMENT ENGINEERS



A NEW COLTON ROTARY TABLET PRESS
SERIES 200-25 ROTARY TABLET PRESS

The design of the Series 200-25 Tablet Machine is an outstanding engineering achievement, the culmination of years of experience in building tablet machines. This compact machine incorporates refinements that provide an entirely new standard of performance for this type of equipment.

ARTHUR COLTON COMPANY

2620 East Jefferson Established 1884 **Detroit, 7, Mich.**

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DEPENDABLE

FILPACO FILTER PAPERS

(Formerly Filco)

Proper filtration is essential in your operations. If you require a uniform filtrate, FILPACO FILTER PAPERS can solve your needs.

Working samples furnished upon request.

We also manufacture:

- ★ filter cloth and asbestos pads
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- ★ stainless steel tanks, for mixing and storing
- ★ easy-ride, gravity wheel conveyors
- ★ disc filters

Write for illustrated literature.

NOTE NEW ADDRESS: We have recently moved to much larger quarters. Our new facilities and increased personnel will enable us to better serve you.

The FILTER PAPER Co.

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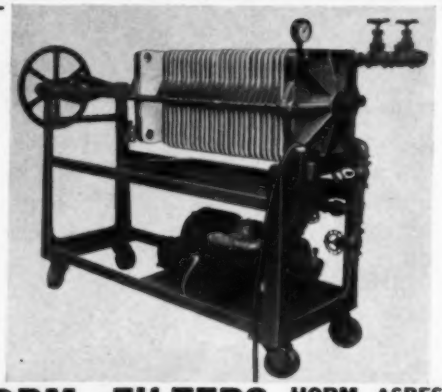

HORM FILTERS

HORM ASBESTOS FILTER PADS

Horm Filters for filtration, clarification, polishing, are designed so that no liquid can by-pass the filter element. They are unsurpassed for drug, chemical and cosmetic preparations.

CLARIFLOW

- –No rubber washers used
- –Adaptable to all types of filter mediums
- –Rapid change of filter pads
- –Construction Stainless Steel or Bronze (nickel plated)
- –Suitable for coarse and fine filtration, including germproof and ultra-fine

HORM ASBESTOS FILTER PADS FOR EFFECTIVE FILTRATION

STERILFLO

TRADE MARKS REG. U.S. PAT. OFF.

F. R. HORMANN & CO., Inc.

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Plant: 30 Sea Cliff Ave., Glen Cove, L. I.

PORTABLE AIR CLEANING UNIT

The E-Z TWO-TUBE CLEANER

SEMI-AUTOMATIC

Cleans 2 Containers Simultaneously. Capacity Up to 30 Containers Per Minute.

FOR cleaning new containers made of glass, tin, china. Resilient rubber container cups protect tops of fragile containers when inverted over cleaning tubes. Quickly removes all dirt, dust, carton lint from containers by compressed air. Cleaning is fully automatic . . . only handling of containers is done manually.

Complete with Air Compressor, ½ H.P. Motor, 10 ft. Extension Cord with Toggle Switch, Pressure Gauge, Pressure Regulator, Air Filter and Vapor Trap with drain for connection to users' air supply. Floor space, only 27 x 14 inches. Designed for quick, dependable use anywhere, instantly. Write for Bulletin.

ROTARY AIR CLEANER. *For a fully automatic machine write for Bulletin on the U. S. Sanitair Automatic Air Cleaner. Exclusive outstanding features. Double-action cleaning. Up to 120 per minute. There's nothing faster, nothing finer.*

COMPANION CLEANING - FILLING. *To clean and fill 50 to 75 gross of containers per 8-hour day, combine the E-Z Two-Tube Cleaner with our new, improved Model B-2 Vacuum Filler. Both 2-Tube machines, unsurpassed for companion operation. Get Bulletin.*

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Machinery Co.
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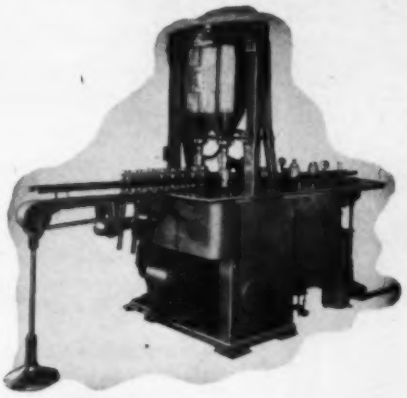
MANUFACTURERS OF
PUMPS
CAPPERS
FILTERS
CONVEYORS
WASHERS & DRYERS
WASHERS
CORKERS
FILLERS

IF YOU PACK . . .
POWDERS IN GLASS



THE S&S HG-84 . . .
WILL PACK THEM FOR YOU

Yes, sir, and you get a *dustless* fill and a tight pack. The Stokes and Smith HG-84 Duplex Heavy Duty Filling Machine answers all the questions for any packer who merchandises powders in glass.

The secret is the "Auger-Vac," or auger-vacuum system, with which the machine is equipped. Combining the speed and accuracy of the auger feed with the dustless feed of the vacuum method, the efficiency of this system has been proven by leading packers throughout the country.

The HG-84 with "Auger-Vac" is available in various types. It fills not only jars, but cans or other airtight containers with pulverized coffee, powdered milk, ice cream mix, malted milk, cocoa or numerous similar products, in the amounts desired.

"Speeds to suit your needs": 15-25-50-100 per minute; "Auger-Vac" method may be used also on other S & S Single Unit Filling Machines. Full particulars on request.

WE REGRET, that we can't ship you a machine as soon as we would like; it's impossible to build them fast enough to keep up with the demand . . . but there'll come a day, we hope, when orders can be filled reasonably soon after receipt.

STOKES & SMITH Co

4912 Summerdale Ave., Philadelphia 24, U. S. A.
FILLING • PACKAGING • WRAPPING MACHINES
Speeds to suit your needs—15-30-60-120 per minute

Better machines for better packages

POWERS

INDICATING and RECORDING THERMOMETERS

Some of the many dial indicating and recording thermometers we make for cooking operations, dryers, and cooling and air conditioning in process rooms are shown here. We also make recording regulators and regulators combined with easy to read indicating thermometers. **Phone or write our nearest office.** Offices in 47 Cities.

THE POWERS REGULATOR CO.

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Here's what you'll like about the new

...''HAGERTY HANDY FILLER''

- Durable
- Moderately priced
- Eliminates spilling
- Simple to operate
- Convenient sizes
- Light construction

The most practical hand filler for creams, lotions and liquids.

Write for illustrated folder and prices

HAGERTY BROS. & CO.
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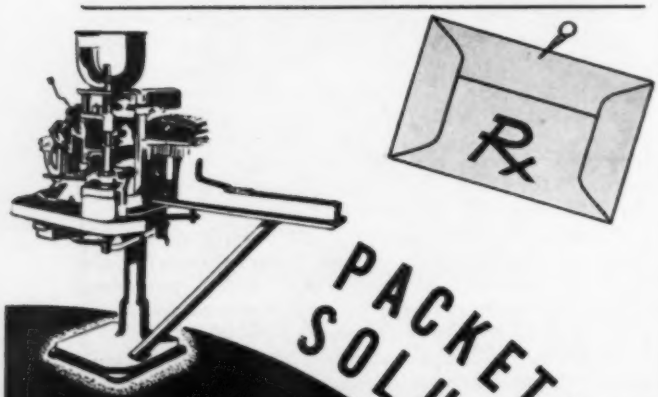
Est. 1849



PACKETING SOLUTION

Increase sales and profits with Brown Packets of your product filled on Brown Automatic Packeting Machines. Scores of food and drug powders, tablets, granules and crystals have opened new avenues to greater sales and better merchandising with Brown Packets. Let us tell you the whole story.

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LABOR SAVING DEVICES on SEWING MACHINES BUILT to ORDER

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POWDER PUFFS • SACHET BAGS
COMPACT BAGS • COSMETIC BAGS, etc.

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SEWING MACHINE CORP.
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CONSOLIDATED OFFERS

1—World automatic Straightaway Labeler.
1—No. 5 Sweetland Filter, 20 copper leaves.
1—Stokes Auger type Powder Filler.
1—Semi-automatic Labeling Machine.
5—Dry Powder Mixers, up to 2000 lbs.
20—Aluminum, Copper, Glass Lined, jacketed and agitated Kettles.
1—Abbe Blutergess Sifter No. 2.
2—Colton No. 3 Toggle Presses.
3—Stokes Steam Water Stills, 5, 10, 25 gal. per hour.
2—60 gal. Aluminum Steam Jacketed Kettles.
1—80 gal. Aluminum Steam Jacketed Kettle.
5—Stokes "R" single punch Tablet machines, maximum 2½" dia. tablet.
4—Colton No. 5½ single punch Tablet machines.

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LABEL PASTERS

SPEEDY
ACCURATE
EFFICIENT

for Hand Labeling

BOTTLES—CARTONS—CANS

POTDEVIN Label Pasters are now being used in over 5000 small and large manufacturing, bottling and packing plants where speedy and accurate labelling is required. Write today for our catalog LP-9.

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POTDEVIN

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Promizole Treatment of Leprosy

Because good results were obtained in tuberculosis of the skin and because it is relatively nontoxic by mouth, G. H. Faget, R. C. Pogge and F. A. Johansen (*Public Health Repts.* 61:957, 1946) considered it feasible to test the therapeutic effect of promizole (2, 4′ diamino-5-thiasolylphenyl sulfone) on leprosy. At present 7 of the original group of 11 patients have been under treatment with promizole for about one year. In two of the original cases the drug was discontinued because of toxic reactions, and two other cases could not be followed up. In this preliminary report no claim is made in regard to the ultimate value of promizole given orally in doses of 6 m. daily in the treatment of leprosy. Attention is called to the fact that promizole is well tolerated by patients with leprosy and that clinical improvement occasionally can be demonstrated more quickly with promizole than with similar sulfones, such as promin and diasone. It is felt that the therapeutic results thus far obtained are sufficiently encouraging to warrant further clinical study, which will be necessary before a final evaluation of promizole in the treatment of leprosy can be given.

Insulin as a Sedative for Psychotics

Physical activity of excited psychotic patients in the tropics must be reduced to prevent undue loss of fluids and weight. On the basis of a report on the use of insulin in sedation therapy, R. A. Brunner and J. W. Owen (*U. S. Naval Med. Bull.* 46:1088, 1946) decided to try this treatment on 21 psychotic patients. Treatment consisted of subcutaneous injections of insulin in amounts sufficient to reduce activity and produce slight drowsiness. Treatment was terminated immediately if the drowsiness became deep or if the pulse, temperature, or general condition indicated that the patient might be approaching shock.

Insulin, used in this way, presented several advantages over more commonly used sedatives. Its sedative effect continued well after the termination of the treatment, appetites were increased, and food and water were taken much better. Generally, the care of the patients was simplified; they were quieter, easier to control, in better contact, and showed a general lessening of their psychotic symptoms.

Oxalic Acid in Wound Healing

Previous experimental research had shown that oxalic acid hastens the healing of normal, non-infected wounds, and that in combination with sulfathiazole the gain in time average is 20 per cent. Clinical confirmation of these results were sought by E. Dube, L. P. Dugal and A. Royer (*Canadian Med. Assoc. J.* 54:103, 1946). In their tests, the patients studied were all skin grafting cases in which donor's areas were used for the experiments. Concurrently, comparisons were made with other types of treatment. The largest wound treated with sulfathiazole-oxalic acid healed 4 days before the two control wounds; one of which was treated with sulfathiazole solution alone and the other with sulfathiazole emulsion. Sulfathiazole-oxalic acid enabled the would to heal almost twice as fast as a wound treated with a greasy dressing. In all, the sulfathiazole-oxalic acid treated wound healed 3 days before the controls, in spite of the fact that it was slightly larger.

Heparin for Frostbite

Animal experimentation has shown tha the timely use of heparin prevents gangrene. With this fact as a background, K. Lange and L Loewe (*Surg. Gynec. and Obstet.* 82:256, 1946) made studies to determine the value of heparin in artificial frostbite in 8 human volunteers. Frostbite was produced by exposure of small areas of the upper arm to dry ice for 10 or 30 minutes. Untreated areas served as controls. Heparin in the Pitkin menstruum was deposited subcutaneously, 300 or 400 mg. daily or on alternate days. The anticoagulant effect could be depressed by application of ice bags or accelerated by local application of heat. Anticoagulant activity after a 400-mg. dose in conjunction with local heat was observed in an hour. The use of vasoconstrictors had an additive prolonging effect. No tissue loss developed in the effectively treated areas, and complete healing without necrosis occurred in 17 to 21 days. Some of the control lesions showed central necrosis which persisted more than 3 to 4 weeks following exposure.

Efficacy of Penicillin Lozenges

According to the report of R. O. Levitt and W. W. Leathan (*Occupational Med.* 1:81, 1946) of 117 patients with acute infection of the nasopharynx and tonsils treated with penicillin lozenges, 110 were rapidly cured. Each lozenge contained 500 units of penicillin. Each patient was given four lozenges, with instructions to place one in the buccal sulcus and allow it to dissolve without chewing or sucking. When the first one was completely dissolved, the second and after it the third were similarly inserted. The fourth was inserted at bedtime. Ninety-nine of the patients were cured in twenty-four hours. Thirteen required two or more courses, twenty-four hours apart. Of the seven patients who did not respond to this treatment, five had tonsillitis complicated by cervical adenitis. The local penicillin appeared to have no effect on deep tonsillar infections. Eighty-seven subjects were successfully treated as outpatients; in the others, hospitalization was shortened 1.5 days as compared with patients receiving nonspecific treatment. Vincent's infection of the mouth was likewise successfully treated by administration of the penicillin lozenges.

NBIN for Scabies and Pediculosis

A new preparation, called NBIN, has been investigated by C. C. Carpenter, J. A. Heinlein, M. B. Sulzberger and R. L. Baer (*J. Investig. Dermat.* 7:93, 1946) and has been found to be effective against both scabies and lice. NBIN can be prepared and stored as a concentrate of the following formula, which is diluted with 5 parts of water before use:

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When NBIN was used on 42 patients who had scabies, the pruritus disappeared within twelve hours and sometimes within a few minutes. One to four sprayings with this emulsion, which can be applied with an ordinary type nasal spray, produced permanent cures in 41 of the 42 patients. A single spraying usually sufficed. A single application of the emulstion was effective in curing 15 patients with pediculosis pubis and 4 patients with pediculosis capitis. There was no evidence of toxicity and no increase of skin irritation. The preparation was easier and more pleasant to use and less irritating than sulfur ointments or an emulsion of benzyl benzoate used against scabies and pediculosis.

Effervescent Mixtures and Ingested Drugs

Although there are many and obvious advantages to the oral administration of drugs, there are certain equally obvious disadvantages. Of these the most prominent are the uncertain and variable rate of absorption and gastric irritation. It is probable that when irritation occurs, its intensity varies with the duration of the contact of the drug with the gastric mucosa, and that it is least when emptying of the stomach is rapid. Since few drugs are absorbed directly from the stomach, the rate of emptying also affects the speed of therapeutic response.

Attempts at hastening the rate of gastric emptying seem warranted when a quick effect of a drug orally administered is required with minimum irritation of the stomach.

With these facts in mind, G. Lolli and R. Smith (*New England J. Med.* 235:80, 1946) undertook a study of the value of effervescent mixtures as adjuvants to the rapid absorption of ingested drugs. Evaluation of the rate of gastric emptying by means of fluoroscopic examination, gastric intubation and determinations of blood concentrations of test drugs indicates that effervescent mixtures decrease the emptying time of the stomach, and are thus valuable aids to the rapid absorption and more rapid therapeutic utilization of orally-administered drugs like sulfathiazole and acetylsalicylic acid. The effect attendant on the administration of an effervescent mixture seems to be due in part to the presence of weak alkaline salts and in part to the production of carbon dioxide.

Pre-Injection Anesthetic for Dentists

S. Cornfeld (*Dental Survey* 22:1101, 1945) cites the well-known fact that most patients visiting a dental office to have a tooth extracted have more fear of the jab of the hypodermic needle than of the extraction itself. Solutions of various local anthesthetic agents have been used to produce surface anesthesia prior to insertion of the needle with varying success. Ethyl aminobenzoate, however, will produce surface anesthesia with certainty and it has properties which make it safer than other topical anesthetics. The following solution has been used:

Ethyl aminobenzoate	**3 drams**
Camphor	**9 grains**
Menthol	**9 grains**
Oil of cinnamon	**18 minims**
Alcohol, to make	**4 fl. ounces**

Dissolve the ethyl aminobenzoate in the alcohol, add the camphor and menthol and then add the oil of cinnamon. If properly prepared, the resulting product should be a clear, slightly yellowish liquid with a pleasant odor. Before inserting the needle, dry the site of injection thoroughly, then apply the solution with a pledget of cotton and hold it in place for a minute or two.

Combined Therapy of Pneumonia

From a study of 1,620 patients with pneumococcic pneumonia, M. F. Collen, A. L. Sellers, and E. C. Kast (*Am. J. Med. Sciences* 121:299, 1946) conclude that combined penicillin and sulfadiazine therapy is very effective. All patients received sodium sulfadiazine, usually in an initial dose of 5 Gm. intravenously, followed by oral sulfadiazine. Adjuvant therapy was used routinely. In addition 195 patients received penicillin and 156 received type specific serum. The mortality rate was 1.5 per cent in the group treated with sulfadiazine alone or combined with penicillin during the year beginning May, 1944; the rate was 6.2 per cent among patients treated earlier with sulfadiazine alone or in combination with serum Penicillin was given systemically, in 100 cases in total doses between 100,000 and 500,000 units and in 85 cases in doses of 500,000 units or over. The lowest death rate was in the 500,000 to 1 million units group. The use of penicillin did not decrease the complications or the length of hospital stay.

Insulin in Chronic Alcoholism

Although insulin and glucose in combination have been used to speed the elimination of alcohol, E. G. Vassaf and V. R. Hall (*New England J. Med.* 235:-190, 1946) have shown that insulin alone exerts a tonic effect in alcoholic intoxication. They report that a series of 43 patients admitted for acute alcoholism were treated by gradual withdrawal of alcohol, with the addition to the control regimen of small doses (10 units) of insulin two or three times daily before meals, without coverage by glucose as such. The insulin-treated cases as compared with the control group showed the following clinical differences: The average speed of the withdrawal period was twice as great. Three times as many patients neither required nor demanded any whiskey after admission. Subjective ease and comfort during the withdrawal period were increased. The requirement of supplementary sedation was greatly reduced, in some cases to zero. The weight gain was increased by threefold, both during the first week of hospitalization and subsequently. Insulin reactions were rare and mild, being readily controlled by oral sugar.

Bismuth Subsalicylate for Vincent's Angina

Many drugs have been used in the treatment of Vincent's angina or ulcero-membranous tonsillitis, but in the opinion of H. D. Grossman (*Eye, Ear, Nose & Throat Mo.* 25:350, 1946), bismuth subsalicylate in oil. given intramuscularly, is the treatment of choice in this condition, Of 150 cases treated with a preparation containing 2 grains of the drug per cc., 10 per cent required three injections before the lesions disappeared completely; the others all had two injections. Although in some cases it appeared that one injection would suffice, a second was always given to prevent the possibility of relapse. Although other medications are not necessary, it may be advantageous to give hot water gargles for the soothing effects of heat, and salicylates to alleviate throat pain.

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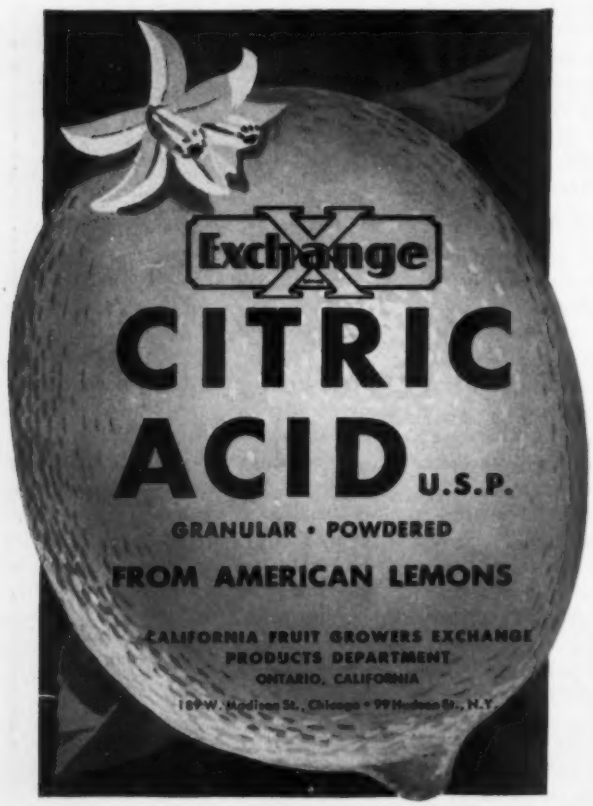

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Industry's Books

Development and Marketing of Pharmaceutical Specialties, by William T. Doyle and A. R. Savina, 78 pp., Drug & Cosmetic Industry New York, $2.

Since the literature on the subject covered by William T. Doyle and A. R. Savina, in their book "Development and Marketing of Pharmaceutical Specialties," is negligible or nonexistant, the work can be considered an original and welcome contribution to the merchandising of drug products. While much thought has been given to the development and marketing of new drug products, not since the advent of this book has there been a careful and detailed guide to the procedure necessary to establish them successfully in a difficult market. The authors have not only outlined the most acceptable steps in modern manufacturing, which should appeal to seasoned executives, but have also provided a form of procedure for those who are planning to enter the field of producing pharmaceutical specialties. The following Table of Contents gives a good idea of the scope of this work: Chapter One: Research And Its Importance—How Much to Spend for Research—Organization of Research Department—Objectives of Research Department. Chapter Two: New Product Development—Direction in Which New Product Development May Proceed—Origin of Ideas for New Products—Screening Ideas. Chapter Three: Research Procedure—Research Conference—Research Reports—Budget—Production and Control—Consultants. Chapter Four: Marketing—Government Regulations—Production Planning—Market Analysis—The Sales Department. Chapter Five: Advertising—Summary.

Water Soluble and Bulking Gums (Tragacanth—Karaya—Arabic), 21 pp. paper, available from Thurston & Braidich, 286 Spring St., New York on request.

Thurston & Braidich, a firm which has over 90 years' experience in the importation, processing, and distribution of vegetable gums, has prepared a most informative and valuable booklet on tragacanth, karaya, and arabic. The purpose of the booklet is to consolidate the rather scattered information available in the literature and to augment the limited knowledge of these valuable gums from their long association with with them. Each gum is treated separately—the history, physical properties, and chemical properties given in detail. Of particular interest is a bibliography of source material for further research.

Modern Drug Encyclopedia and Therapeutic Index, Edited by Alexander B. Gutman, Ph.D., M.D., Assistant Professor of Medicine, College of Physicians and Surgeons, Columbia University, Third Ed., 1157 pp., The Yorke Publishing Co., New York, $10.

The Third Edition of this valuable reference book has been awaited for some time and its arrival is most welcome. Designed for quick-reference desk use, the Third Edition has been completely rewritten and reset. Drugs are arranged alphabetically in three main divisions, i.e., Pharmaceuticals, Biologicals, and Allergens. A Manufacturers', a Therapeutic, and a General Index have been included for quick reference. Only ethical drugs have been described in the book. Structural formulas are a new feature and the composition, action, uses, administration and supply of approximately 8,000 medicinal preparations are presented. The quarterly supplementary service, New Modern Drugs, which keeps the book up to date, is supplied free to all purchasers of the Drug Encyclopedia.

Quantitative Analysis with Applications to Agricultural and Food Products, by Howard O. Triebold, Ph.D., Professor of Agricultural and Biological Chemistry, Pennsylvania State College, 331 pp., D. Van Nostrand Co., New York, $3.

There is a growing demand for students in agricultural curricula (agronomy, dairy manufacturing, horticulture, pre-veterinary, soils, etc.), as well as students in food and nutrition curricula, to acquire training in the fundamentals of quantitative analysis with sufficient laboratory techniques to equip them for control and research work in these various specialized fields. To meet the demands and interests of such students has been one of the objects of this book. Parts I, II, and III are designed to give the student the fundamentals of quantitative analysis. Physical chemical methods are being used more and more extensively in quantitative analysis. A number of these methods are discussed in Part IV. Part VI deals with the methods of analysis for a number of agricultural and food products. In Part VII, the author explains certain types of problems that are used frequently in quantitative analysis.

The Alkaline-Earth and Heavy-Metal Soaps, by Stanley B. Elliott, Assistant to the President, The Ferro Chemical Corp., Cleveland, American Chemical Society Monograph Series No. 103, 342 pp., Reinhold Publishing Corp., New York, $7.50.

This book is intended to acquaint the research chemists and technologists in a number of industries with the manufacture, properties, and typical applications of the alkaline-earth and heavy-metal soaps. Numerous brief discussions of these compounds have appeared at various times in the journals, but no book is available in English which considers them at any length. Chapters: The Constitution of Metallic Soaps; Organic raw Materials; Inorganic Raw Materials; Solvents and Addition Agents; Precipitated Soaps; Fused Soaps; The Soap Plant and Equipment; The Classification of Soaps; Applications of Metallic Soaps; Soaps of Group I Metals (Cu, Ag); Group II Metals (Ca, Sr, Ba, Be, Mg, Zn, Cd, Hg); Group III Metals (Ce, Al, Tl); Group IV Metals (Tl, Zr, Hf, Th, Sn, Pb); Group V Metals (V, Sb, Bl); Group VI Metals (Cr, U); Group VII Metals (Mn); Group VIII Metals (Fe, Co, Nl); Analysis of Metallic Soaps and Raw Materials Used in Their Manufacture; Patents Pertaining to the Use of Metallic Soaps; Metallic Soap Specifications; Application of Metallic Soaps; Conversion Tables; Common Commercial Metallic Soaps; Inorganic Compounds Suitable for Preparing Metallic Soaps for Research.

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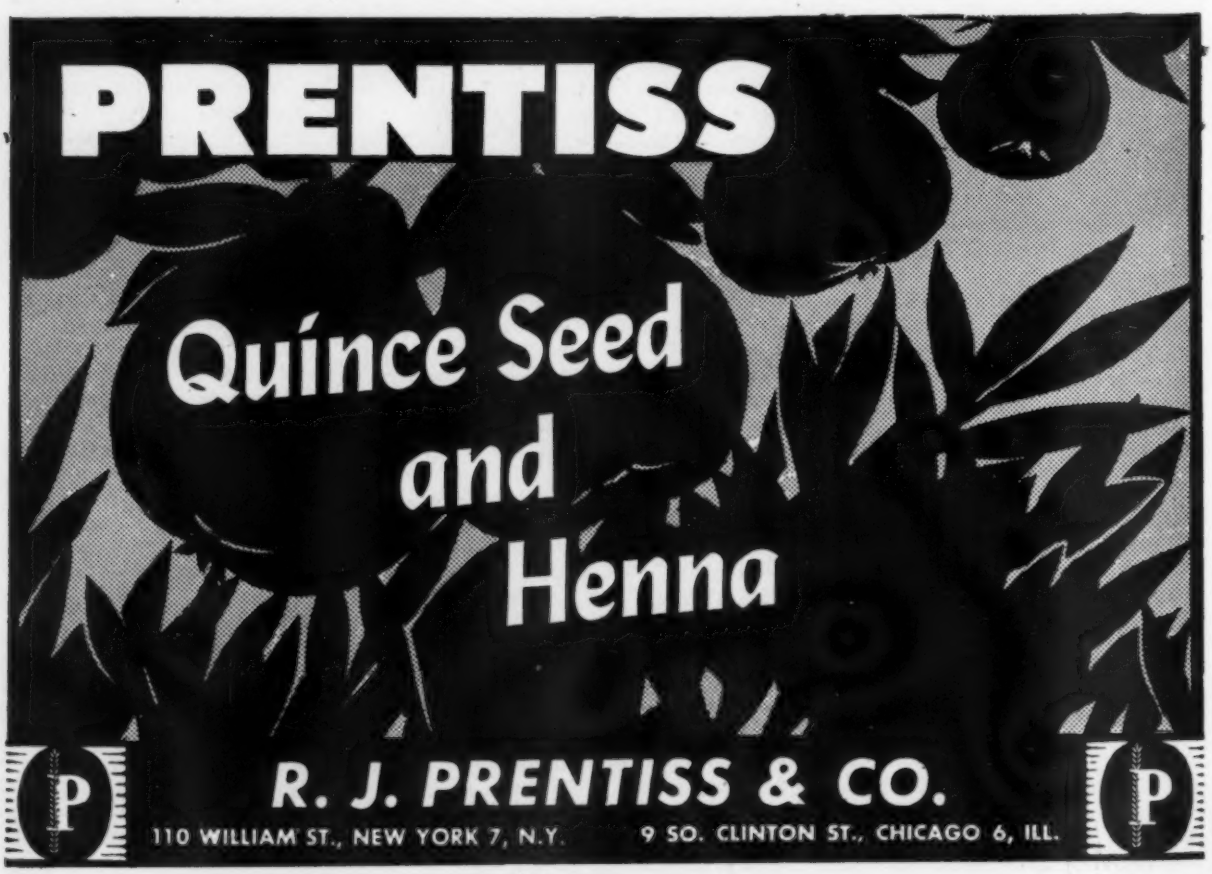

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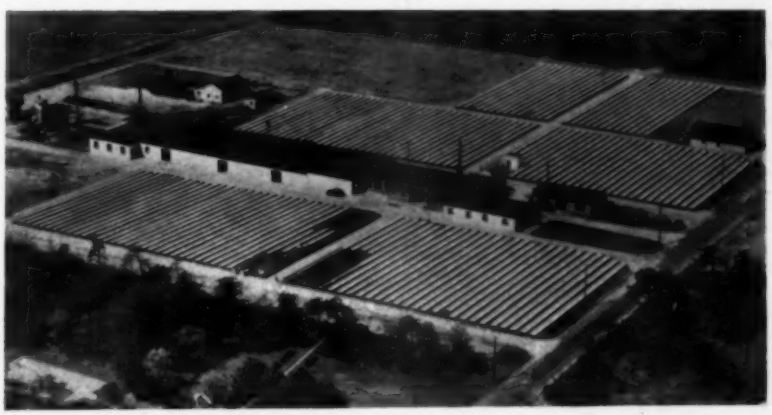

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Perfumer's Shelf

Camphor Production in East Africa

In a discussion of camphor production in East Africa from *Cinnamonom Camphora*, A. G. G. Hill (*East African Agr. J.* 11:148, 1946) reports that pilot plant yields from the trees were 1.2 to 1.5 per cent solid camphor plus 0.3 per cent camphor oil from the steam distillation of the leaves, and 0.6 per cent solid camphor plus 0.15 per cent camphor oil from the distillation of the wood. The apparatus and process used for this purpose are described. It was found that the bulk of the yield was obtained in the first few hours of distillation. Yields were reduced by delay in the distillation of the chips. Inherent qualities of individual trees were also important factors in determining the yield.

Sarsaparilla

Native to the Americas, sarsaparilla was introduced into Europe about 1536 A. D. The drug was widely used by European physicians during the sixteenth century in the treatment of syphilis, but gradually its popularity waned. About the middle of the eighteenth century, however, sarsaparilla once more won medical approval. From that time until a hundred years later, the drug was considered highly effective as an alterative in the treatment of certain skin diseases, syphilis, scrofula, and chronic rheumatism. Toward the end of the nineteenth century sarsaparilla once more fell into disfavor with the medical profession and its remedial properties were relegated to legend. Only its use as a vehicle, or syrup medium in which medicines are administered, saved it from oblivion. Today, sarsaparilla is considered valuable in some quarters because of its ability to increase the absorption of other drugs by the intestinal tract. Its chief use now is as a vehicle in pharmaceutical preparations, but it is also sometimes used as a flavor in beverages.

According to B. Du Frane (*Agri. in the Americas* 6:151, 1946) sarsaparilla is obtained from the dried roots of several species of *Smilax* which grow in Jamaica, Mexico, Central America, and the warmer areas of South America. Complete identification of these commercially accepted species of *Smilax* has not yet been made. *Smilax officinalis*, *S. papyracea*, and *S. aristolochiaefolia* (*S. medica*) are believed to furnish most of the drug-bearing roots. *Smilax officinalis* is also known as Jamaica sarsaparilla and *S. aristolochiaefolia* as Mexican sarsaparilla. Other commercially marketable roots are known by various names, based on the area from which they are obtained, as Lima, Honduras, Guayaquil, and Guatemala sarsaparilla. Roots of sarsaparilla plants may be harvested annually, with the first harvest taking place from 2 to 3 years after planting. Only the larger roots are cut, after which the base of the plant is carefully covered with soil. The hardy shrubs soon develop new roots. The harvested roots are dried and then packed for shipment.

Sarsaparilla may be extracted by boiling the dried roots in water or in alcohol. Powdered sarsaparilla ranges from pale yellowish orange to pale brown in color. In addition to three saponins (*smilasaponin*, *sarsa-saponin*, and *parillin*) the roots also yield paroaparic acid and resin. Taste is considered a sufficient test of root quality. Almost odorless, sarsaparilla is rather sweet, acrid, and sticky to the taste. Sarsaparilla that is highly acrid is of the best quality; sarsaparilla that is not acrid is considered useless.

The roots of a number of plants have been used as substitutes for true sarsaparilla. Among these are certain species of *Pteris* and *Philodendron*. The roots of *Menispermum canadense* are known as Teaxs sarsaparilla. Other adulterants are obtained from the roots of *Aralia nudicaulis* and *A. hispida*. In Australia the root of *Hardenbergia* replaces true sarsaparilla. In India a plant known as *Hemidesmus indicus* is used; in Italy, a plant known as *Smilax aspera*.

Volatile Oil Content of Orange Peel

E. T. Bartholomew and W. B. Sinclair (*Calif. Citrograph* 31:293, 1946) have found that the yield of volatile oil per unit area from Valencia orange peel shows very little change from the time the fruit is half grown until it is mature. but the yield per fruit increases in proportion to the increase in surface area of the peel. After maturity the oil content of the peel appears to be governed more by climate and physiological considerations than by any change in the surface area of the fruit. Thus, the oil content of Valencia and navel peel is highest in the inland fruits and progressively lower in those grown nearer the coast. Large fruits yield more oil than small fruits when expressed as yield per surface area, but the reverse is true when the yield is expressed on a tonnage basis. The oil in the peel of Valencias increases progressively from the stem end to the stylar end of the fruit. In general, similar conditions hold true for navels but not to such a marked extent.

Essential Oil of Anisomeles Malabarica

Although the plant *Anisomeles malabarica* is widely used internally for rheumatism and a variety of diseases, an infusion of the leaves for dyspepsia, and an essential oil distilled from the leaves as an embrocation in rheumatic arthritis, little is known of its chemistry. Accordingly, an investigation of its alkaloidal and essential oil content was undertaken by I. S. B. Rao and D. N. Majumdar (*Indian J. Pharm.* 7:123, 1945). The percentage of alkaloid was so small that the work was concentrated on the essential oil. The main sources of the oil were found to be the tops and flowers of the plant. Chemical examination of the oil indicated that it was chiefly hydrocarbon, with small quantities of an oxygenated compound, citral and geranic acid. Further work is being done.

Violet Perfumes

In another of his indicative discussions on flower perfumes, F. V. Wells (*S. P. C.* 19:473, 1946) remarks that violet perfumes, as such are not so popular as they once were. Nevertheless, violet compounds and their essential constituents, the ionones and methyl ionones, find a wide and important range of applications in modern perfumery. Thus we find the violet note in "woody" creations (with patchouli, vetivert, sandalwood, cedarwood); in Harris Tweed and Russian Leather types; in flower bouquets of the "perfumed breeze" type (e.g., with lilac and jasmin); and in such flower perfumes as cassie, mimosa, reseda and cyclamen.

Violet leaf and violet flower absolutes are both obtained in small and proportionately expensive yields by volatile extraction; the flowers are also treated by maceration with hot fats. The leaf absolute is remarkable for its high con-

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WHEN and *who* discovered the phenomenon of perfume fixation are mysteries that go far back to the beginnings of the perfumer's art. Yet it is upon this early discovery of the fact that certain substances, when combined with the volatile constituents of an odor, tend to retard evaporation and thus, prolong its life, that today's perfume, toiletry and cosmetic business flourishes. For without the proper balance of fixative and aromatic, the finest perfume would possess little more than momentary seductiveness, its appealing fragrance quickly unbalanced by the rapid evaporation of its more volatile parts.

Our laboratories have studied this subject intensively over a long period of years and as a result have developed a sure proficiency in the selection and adaptation of fixatives most suited to the peculiarities of each individual problem. We have also perfected a number of specialties, aside from our fine selection of natural fixatives, that provide, in certain instances, pronounced advantages. A small selection of the fixatives now available is presented in the accompanying column. We suggest, however, that unless you have a sure knowledge of your problem and its requirements, you take advantage of our broad laboratory experience and facilities: Write us your problem and, if possible, send us a sample of your product, in its original container, for our examination and suggestions as to how you can achieve more effective fixation with a possible lowering of cost.

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IVES

RENCE!

hat go far back to the begin-
substances, when combined
its life, that today's perfume,
and aromatic, the finest per-
ance quickly unbalanced by

d as a result have developed
uliarities of each individual
ion of natural fixatives, that
es now available is presented
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In presenting the various fixation agents and specialties offered on these pages, we do so with the hope that those not entirely familiar with their use will feel free to consult us before attempting to select fixation agents suited to their purposes. By so doing you will gain the benefit of complete and reliable suggestions for the solution of your fixation problem.

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FACTORIES AT CLIFTON, N. J. AND SEILLANS (VAR) FRANCE

tent of 2:6 nonadienal, which is found together with the corresponding alcohol, other alcohols, free fatty acids, and phenolic and lactonic compounds. The flower absolute contains nonadienol, non-adienal, octadienol, n-hexyl alcohol, heptenol, benzyl alcohol and heliotropin, together with Ruzicka's "parmone" (isomeric with the ionones) and, probably, eugenol, Violet roots probably contain methyl salicylate.

According to this authority the most important bases for artificial violet compositions are, of course, the ionones and methyl ionones. Of more specialized interest at present are irone (characteristic orris ketone) and parmone. To impart "solidity" to the ionone odor, orris concrete and other natural products are used, while traces of such bodies as methyl heptin or octin carbonate, heliotropin and higher aldehydes are customarily regarded as essential. Thus we may start with alpha, beta or 100 per cent ionone (15-40 per cent), methylionone (10-30) and methyl heptin or octin carbonate (1-2)—the last-named constituent giving the leafy effect and bringing out the full value of the ionones. To this base may be added heliotropin (3-8), ylang-ylang oil (1-4) and other natural flower products (total: 10-25 per cent).

The use of some natural absolute in high-class violet perfumes is essential. Failing the extremely expensive violet flower absolute, recourse is had to violet leaf, cassie, mimosa, reseda or karo-karounde absolutes—not forgetting some form of orris; and jasmin and rose as modifying *florales*. Other essential oils of interest include bois de rose Brazil, bergamot, carrot seed, costus, coriander and sandalwood. Other useful alcohols include santalol and vetiverol, phenylethyl alcohol and rhodinol. Small quantities of eugenol, isoeugenol and benzyl isoeugenol may also be of interest. Traces of amyl and methyl salicylates may give interesting effects. The following materials are sometimes useful in carefully regulated dosages: anisic aldehyde, cuminic aldehyde, civet and benzoin. Excesses of musk, sandal and vanillin must definitely be avoided in this type of odor. Hydrocitronellal is occasionally employed, but too much of it gets the resulting complex well away from the true violet fragrance. Of the aldehydes, C_{12} is widely favored

Patchouli Oil from Nyasaland

A sample of patchouli oil received from a planter in Nyasaland in May 1945 is the subject of a report by H. T. Islip in the *Bulletin of the Imperial Institute* (44:12, 1946). It was stated that the oil had been distilled from plants grown from cuttings obtained from the Seychelles three years before. Investigations were started to determine the value of the oil and whether it was identical with the Seychelles product. The sample, had the characteristic aroma of patchouli oil, with a distinct camphoraceous subsidiary odor. The oil was somewhat turbid owing to the presence of moisture, and after filtration through paper the clear oil was brownish-yellow in color. On examination the clear, filtered oil was found to have the following constants:

Specific Gravity 15.5/15.5° C.	**0.9662**
Optical Rotation, α_D 20° C.	**−55.76°**
Refractive Index. n_D 20° C.	**1.5009**
Acid Value	**0.7**
Ester Value	**1.1**
Solubility in 90 per cent v/v alcohol at 15.5° C.	**Soluble in 9 vols. with opalescence.**

These results show that the sample of patchouli oil from Nyasaland had constants falling within the ranges of figures obtained at the Imperial Institute for normal patchouli oils distilled in the Seychelles. The ester value is very slightly below the lower limit recorded by Parry for Singapore patchouli oil.

The oil was submitted to several essential oil firms for their views. Regarding the commercial value of the oil opinions differed somewhat as to the relative merits of the Nyasaland oil compared with the Seychelles product. There is little doubt, however, that under the present very abnormal conditions the oil would find a ready market and even in normal times oil of similar quality would be marketable at prices comparable with, though probably some what lower than, those obtaining for the Seychelles oil.

Palestine Lemon Oils

In July 1944 the Imperial Institute in London was asked for the analytical constants of genuine and typical Palestine lemon oil. No data being available on authetic oils, arrangements were made whereby samples of oil from the 1944-45 crop were to be forwarded to the Institute for analysis. The samples of oil, from six different producers, were examined in April-May 1945. Later, in September 1945, the oils were re-examined to ascertain whether any significant changes in the composition of the oils had taken place. Between the two examinations, the samples had been stored in the dark in their original bottles, but because the bottles were only partly filled, an opportunity for oxidation undoubtedly existed.

The results of the analyses, presented by H. T. Islip and F. Major (*Bull. Imperial Inst.* 44:5, 1946) provide useful data, but until a greater number of samples has been examined no attempt is made to define the range of constants for oils from this source. The oils were filtered before examination and the results obtained were compared with the British Pharmacopoeia requirements for oil of lemon and also with recorded constants for Sicilian oil. Examination of the six Palestine lemon oils showed that they met the requirements of the British Pharmacopoeia in all respects except the following. The optical rotation was higher in every case than that allowed. The amount of citral in all six lemon oils fell into line with the requirements of the Pharmacopoeia, but in each case the figure was below the minimum of the ranges for Sicilian lemon oil quoted by Gildemeister and by Parry. The optical rotation of the Palestine oils was generally higher than that of Sicilian oils. The odor and flavor of Palestine oils were different from those of Sicilian oils.

Following examination of the oils in September, it was observed that a definite increase in specific gravity had been brought about by storing the samples. The optical rotation of the oils was somewhat lower than when the measurements were made originally, though still above the maximum given in the British Pharmacopoeia. Little change had taken place in the refractive index of the samples, which in every case still conformed to the British Pharmacopoeia requirements. With one exception, a considerable drop in citral content had taken place. It seems clear from a comparison of the results obtained in April-May 1945 with those obtained in September 1945 that, except for one specimen, the composition of the samples changed materially during the interval between the two examinations. It is well known that lemon oil is highly susceptible to oxidation: if the clear, dry oil is stored in full containers in the dark little change takes place, but with access of air oxidation may take place rapidly. Admittedly, in the present instance, after the examination had started, the best conditions for storage (apart from being in the dark) were not present, and some oxidation was only to be expected.

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PURCHASING DEPARTMENT

Domestic Essential Oils Continue In Small Supply; Increase In Imports Helps Home Market

Meager stocks of domestically produced essential oils, affected adversely by lack of raw materials and labor-management difficulties, are being aided considerably by increasingly larger receipts of foreign oils.

The Bureau of Agricultural Economics, Department of Agriculture, recently estimated domestic production of mint oil for 1946 at 1,703,000 pounds, a decline of 5 per cent from the 1945 crop. The 10 year (1935-44) average output was 1,212,000 pounds.

Production decreases from last year's crop are expected in Indiana, Michigan, and Washington as a result of acreage decreases in Indiana and Washington and of lighter yields in all 3 States. Oregon has increased its acreage over last year's and better yields are in prospect.

About 84 per cent or 1,429,000 pounds of this year's estimated production is peppermint oil; the balance, 274,000 pounds, represents the prospective production of spearmint oil. The 10 year average (1935-44) output of peppermint oil was 1,042,000 pounds, while the average for spearmint oil was at 170,000 pounds.

Substantial imports were noted for anise, ylang-ylang, cassia, cedarleaf, lavender, lemon, lemongrass, lime, palmarosa, patchouli, peppermint, petitgrain, and pine needle.

Essential Oils Off OIT "Positive" List

Removal of a large number of natural essential oils from the "positive" list of commodities requiring individual export licenses was announced by the Office of International Trade, September 6. The oils may now be exported under general license to all group K countries.

Among the oils transferred to general license are spearmint, wintergreen, pennyroyal, sweet birch, citronella and a long list of other minor oils lifted under the Department of Commerce schedule B, No. 207998. Peppermint oil and jasmine oil remain on the positive list.

SEPTEMBER PRICE CHANGES

UP

Benzyl propionate 15c
Colocynth pulp 3c
Mace oil, dist. 25c
Mustard oil, art. 10c
Nutmeg oil 25c
Petit grain oil SA 35c
Podophyllin $2
Sage oil Spanish 10c
Wormseed oil $1

DOWN

Almond oil sweet 5c
Benzyl formate 5c
Bromstyrol 35c
Cantharides Chinese 25c
Caraway oil 35c
Cassia oil Redist 50c
Cinnamic aldehyde 10c
Cream tartar 6c
Eugenol 5c
Gentian root 1c
Geranium oil African $2
Ginger oil $1
Lanolin 3c
Lavender spike oil 5c
Methyl cinnamate 25c
Oleoresin capsicum 15c
Orange oil Calif. 15c
Phenylacetaldehyde 5c
Pimento leaf oil 50c
Rhubarb root HD 20c
Rochelle Salt 4c
Saffron Spanish 50c
Sassafras oil 10c
Seidlitz mixture 3c
Tartaric acid 8c
Tartar emetic 4c

• **Prices quoted in this section were current on the first of this month.**

Orange Oil

Imported stocks of orange oil continued to be more readily available in volume than the domestic oils. There were price changes as sweet California, distilled, dropped 15c per pound to a range of $1.60 to $2 per pound, and sweet Florida distilled slumped 4c per pound into a new range of $1.46 to $1.80 per pound.

Essential-Oil Exports, Paraguay

Declared exports of oil of guaiac wood from Paraguay to the United States during the first half of 1946 amounted to 2,040 kilograms valued at $9,837, as compared with 5,060 kilograms valued at $24,880 in the corresponding period in 1945.

Declared exports of petitgrain oil from Paraguay to the United States decreased in volume, but not value. Such exports amounted to 51,740 kilograms during the first half of 1946, compared with 67,667 kilograms in the corresponding period in 1945. The value of these exports rose, however, from $220,143 in the 6 month period ending June 1945, to $297,688 in the corresponding period of 1946, owing to the increase in price

Angelica Scarce

Stocks of angelica oil were extremely limited as quotations varied in a particularly wide range of $115 to $275 per pound for root oil. Demand was moderately strong with only small spot stocks moving. Seed oil, which was even less available than root, was quoted at from $115 to $265 per pound.

Petitgrain Up

Limited stocks of oil petitgrain forced prices upward as buyer interest continued at the previous moderately high level. Paraguay petitgrain was quoted at $4.35 to $4.75 per pound, an increase of 35c per pound from the previous $4 quotation.

Miscellaneous

Sweet almond oil was lower at $1.10 a pound, a drop of 5c. Stocks of anise were in fairly good supply.

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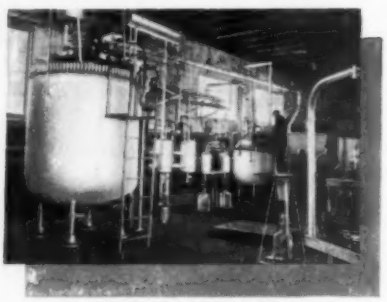
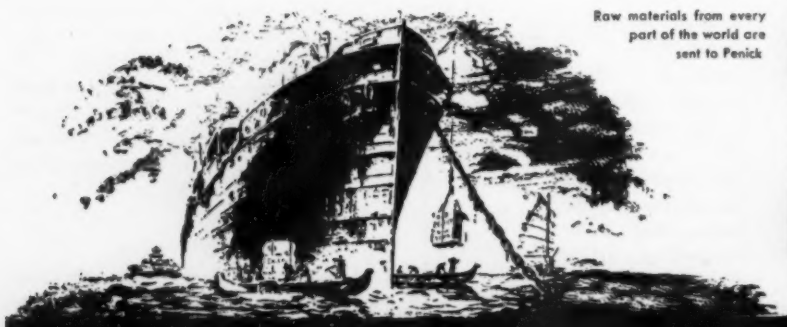
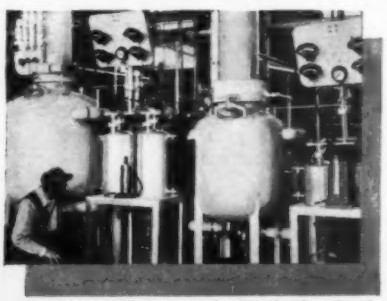


Partial view of Distillation Room.



Raw materials from every part of the world are sent to Penick



Partial view of high vacuum fractionation department.

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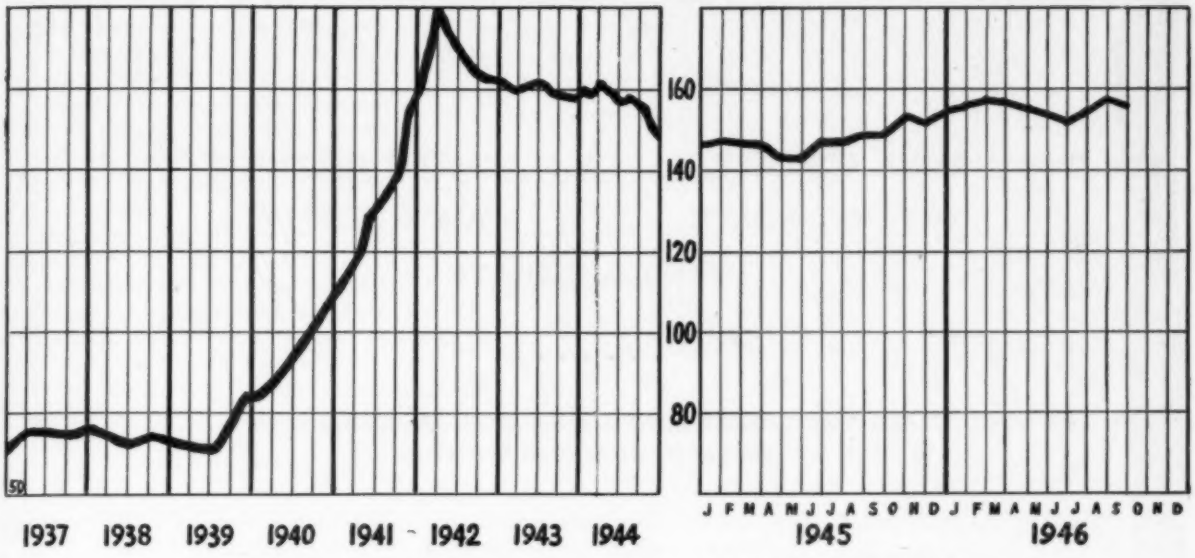
50 Raw Materials—Weighted Price Index. 1926=100.



The price index of fifty commodities for September declined from 159.2 to 156.5.

Crude Botanicals Continue In Small Supply; Dealers Endeavor To Keep Prices Down When Supply Permits

Recent arrivals of such medicinals as Chinese rhubarb root and jaborandi leaves helped relieve the shortages of these commodities. Stramonium leaves were in plentiful supply and lower priced. Lemon peel and blonde psyllium seed are scarce. Detentions at the ports of entry continue to build up accumulations of raw materials.

Where crude medicinals are in fair supply dealers in these commodities are working in the interest of lower prices. However, in certain sections, and on particular items, prices continue to remain unstable.

Reflecting available new crop material, prices of gentian, aconite, ginger roots, and black haw root bark were slightly lower. The price of senega root continued to reflect a further easing of the market at the source.

Balsams Firm

The balsam market remained unchanged with demand running ahead of supply in most instances. Although May receipts of copaiba were nearly 10 per cent more than those of the preceding month and imports for the first 5 months of this year were up 54 per cent over the corresponding 1945 period, current arrivals were absorbed speedily. Demand for fir has slackened somewhat while a fair supply of tolu and Peru is moving to consumers through a firm market.

Balsam imports dropped 44 per cent during May as compared with imports in the preceding month. Copaiba and tolu gained 10 and 25 per cent respectively, while fir declined 55 per cent, Peru 83 per cent, and styrax 74 per cent. May receipts of copaiba were the largest so far this year.

Total balsam receipts for the January-May period were 75 per cent above those in the same months of 1945.

Gum Tragacanth Firm

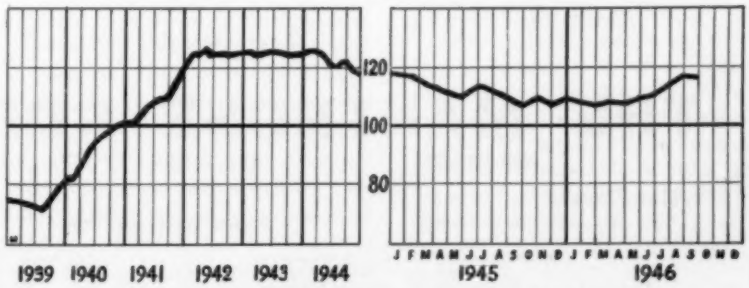
No gum tragacanth has been shipped out of the Persian Gulf for some time, according to reports here since steamer space has been diverted to other articles. Importers have been promised a steamer early in October, but these goods will not reach here until December. Any slight upturn in activity, it is pointed out, would catch the supply short pending December arrivals.

Pyrethrum Production

In Gautemala approximately 30 metric tons of dried pyrethrum flowers are ready for shipment to United States markets. Exporters are awaiting the outcome of a request to the local steamship companies for the establishment of a special rate of this product. If faforable shipping rates are obtained and prices remain at present levels, 50 tons may be exported by the end of 1946.

Should this year's sales prove profitable, growers state they may produce 100 tons of pyrethrum in 1947.

15 Medicinal Chemicals—Weighted Price Index. 1926=100.



The medicinal chemicals index was down from 139.5 to 138.0.
Cream of tartar dropped to 45½ cents.

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Firm Market For Vanilla

The cost of vanilla beans, clove spice, and a number of high priced floral oils from Madagascar may be materially increased in view of the latest reports from the primary center. Annual consumption of Bourbon vanilla beans, source of natural vanilla used in flavoring a long list of food products, confections, etc., is estimated at between 400 tons with a value of between $7,000,000 to $8,000,000.

An announcement by the Colonial Ministry to the effect that a greater tonnage of vanilla beans produced in Madagascar must go to France has materially upset negotiations for a new export quota which was scheduled to be announced by the French Colonial Government by October. Based on the last export quota the United States was allocated 250 tons of beans covering the final half of this year. Last year the United States imported 550 tons of beans from Madagascar.

Prices on beans from Mexico, the only other major source of supply, have been too high as compared with ceilings due to a poor crop last year. Curers will shortly start buying the new crop of green beans, but these goods will not be ready for shipment until late February or early March.

Vanillin Tight

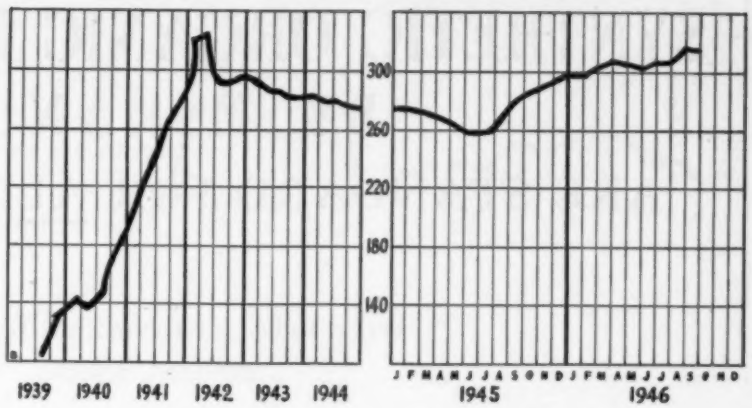
Vanillin or artificial vanilla continues very scarce. Continuation of a strike in the plant of a principal producer of guaiacol vanillin is affecting the supply position of the market while demand for eugenol and lignin vanillin is reported running ahead of the available supply.

Carnauba-Wax High

Carnauba wax prices are maintained at abnormally high levels and for this reason trade factors believe that there is little possibility of the market advancing to much higher levels despite the extremely bullish reports reaching some local houses from Brazil. Reports to the effect that over 50 per cent of the new crop is already sold are discounted in some directions since there has been considerable buyer resistance in the United States because of the exceedingly high prices. In some directions it is not believed that any more than 800 to 1,000 tons of the new crop has been sold. The new crop, according to estimates, will run between 10,500 and 11,000 tons.

Brazil's exports of carnauba wax in the first quarter of 1946 increased 59 per cent in quantity and 130 per cent in value over those in the corresponding period of 1945. They amounted to 3,468 metric tons worth $6,653,000, and 2,177 tons valued at $2,889,350, respectively.

15 Botanicals—Weighted Price Index. 1926=100.



The botanicals index declined from 331.1 to 330.2. Gentian was lower at 28 cents; rhubarb declined to $1.55.

FINE CHEMICALS

Lanolin Down

A plentiful supply and active competition has worked a decline in prices for lanolin. The cosmetic grade was quoted at 28c to 30c per pound and the pharmaceutical was named at 27c to 29c.

Alcohol Production From Grain Urged

Removal of restrictions on the use of corn in making industrial alcohol, so that producers can meet the country's requirements until other raw materials are plentiful, was recommended by the Industrial Alcohol Industry Advisory Committee in a meeting with the Civilian Production Administration.

The committee also recommended removal of the present wholesale ceiling price of 53.5c a gallon on industrial alcohol made from molasses; adjustment of price ceilings on derivatives of alcohol, an end to Reconstruction Finance Corporation subsidies on alcohol, and an orderly liquidation of the RFC alcohol stockpile.

Government presiding officer Lawrence Brown said that corn was needed as a raw material because the supply of molasses from which industrial alcohol ordinarily is made is in extremely short supply.

Glycerin Firm

Because of the maritime strike two shiploads of copra due to arrive on the Pacific Coast from the Philippines have been diverted to Europe. Such a development in the face of a reduced slaughter of animals which normally give a high yield of fat for the soap kettle, has brought about a complete change in the glycerin supply outlook for the final quarter of this year. For a time it was believed that, because of the greater quantities of copra arriving here, it would be possible for the Government to increase coconut oil allocations to the soap trade to about 40,000,000 to 50,000,000 pounds monthly over the final quarter of the year. While the pressure of demand for glycerin has eased somewhat because of shortages and labor difficulties it is now felt that this major chemical will remain in very short supply over the balance of the year.

Palm-oil Output Low

Most of the palm oil produced for export in the Netherlands Indies came from foreign-owned estates in Sumatra. The United States was the principal market, normally taking more than 50 per cent of the exports. Condition of the estates in Sumatra is not known, but such statistics as are available indicate that the planted area of 218,117 acres in 1942 declined to 182,500 acres by 1945, a decrease of approximately 16 per cent. Production of palm oil in Sumatra is reported to have declined from 250,000 tons in 1940 to 67,000 tons in 1944, a decrease of more than 70 per cent.

It is reported that heavy damage was sustained by the plantations through

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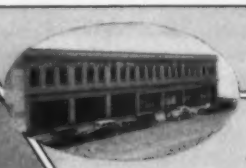

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neglect and the clearing of trees to make way for other crops. The condition of the oil mills is unknown, but it is assumed that some equipment was removed or scrapped. Although recent press dispatches suggest that many estates are intact, it is obvious that an accurate appraisal of conditions must await restoration of stable conditions in producing areas.

It has been stated that only the reestablishment of railway equipment on the estates and installation of pressing and sterilizing equipment in the factories will make renewed production possible.

Menthol Easy

A fair quantity of menthol was recently purchased by the Government, but demand from regular consumers is limited and reports current in the trade indicate that the inside price of $8.25 might possibly be shaded a bit. During the period under review about five tons of menthol arrived here from China. This was held up by the shipping strike but will come on the market at about the time consumers normally buy for their winter requirements.

Iceland Cod-Liver Oil

Among Iceland's chief exports of fish by products in 1945 were 8,381 metric tons of cod-liver oil, valued at 32,671,000 crowns (6.50 crowns equal $1). In the preceeding year, 6,377 metric tons of this oil with a value of 21,988,000 crowns were exported.

Podophyllin Up

Because of the exceedingly tight supply position in mandrake root, podophyllin is scarce and sharply higher in price. The latter article is used in a number of manufactured preparations. New price for 100 pound lots or more is $12.25 per pound, while for small lots $13.50 is quoted.

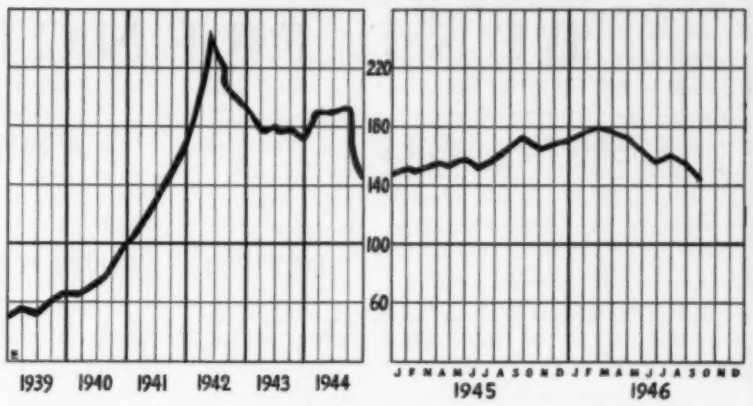
Niacinamide Down

Pricewise the market is featured by a reduction in niacinamide, a major vitamin used by table makers and in the present flour enrichment program. One kilo drum price is now $9.80 per kilo; 50 kilo drums $9.50.

Mercury Easy

No price movements are noted in mercury although an unsettled tone is indicated by the fact that current quotations are subject to shading. Another large quantity of metal, totaling about 4,000 flasks, arrived here recently. This is the third or fourth good size parcel of imported metal to arrive within the past six or eight weeks, totaling about 15,000 flasks. The first large lot to arrive, over 8,000 flasks, was said to be sufficient to take care of our total domestic requirements for three months.

15 Essential Oils—Weighted Price Index. 1926=100



The essential oils index declined from 145.1 to 140.6. Cassia was lower at $4; geranium oil dropped to $16.

Camphor Firm

Synthetic camphor displays a strong tone. Current quotations on both slabs and powdered material are entirely nominal with distributors considerably behind on deliveries. In keeping with the recent sharp increase n the ceiling price of turpentine, it is quite possible an upward adjustment in synthetic camphor prices will be noted. Meanwhile, offerings from China at $1.30 per pound are regarded as entirely too high. An advance in synthetic camphor prices and some readjustment in Chinese prices could, however, place the latter article in a more favorable position for domestic consumption.

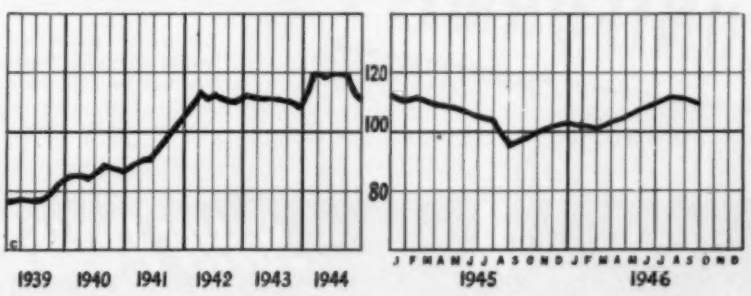
Castor Oil Firm

Higher ceiling prices on castor beans from Brazil and higher ceilings on No. 1 and No. 3 grades of castor oil were reported on September 17 by the Office of Price Administration. Beans to arrive at the first United States point or port on the Atlantic or Gulf coasts were raised to $165 per long ton, cif those points. The price cif Pacific coast ports was up to $167.18 per long ton.

The action by OPA raised prices 5.2c per pound on USP oil in tanks, making the market 19.5c per pound. Packed in drums the oil costs 5¼c more and carlots stand at 20¼c, while less carlots becomes 21c. The No. 3 quality in tanks now stands at 19.20c drums, carlots, 20c; less carlots, 20¾c.

Total arrivals of castor beans since January 1 this year are now 930,466 bags, or 139,569,900 pounds, which is far less than the total of 1,332,723 bags, or 199,908,450 pounds during the corresponding period of 1945.

25 Cosmetic Raw Materials—Unweighted Price Index. 1926=100.



The cosmetic raw materials index declined from 112.1 to 111.7. Lanolin was lower at 27 cents.

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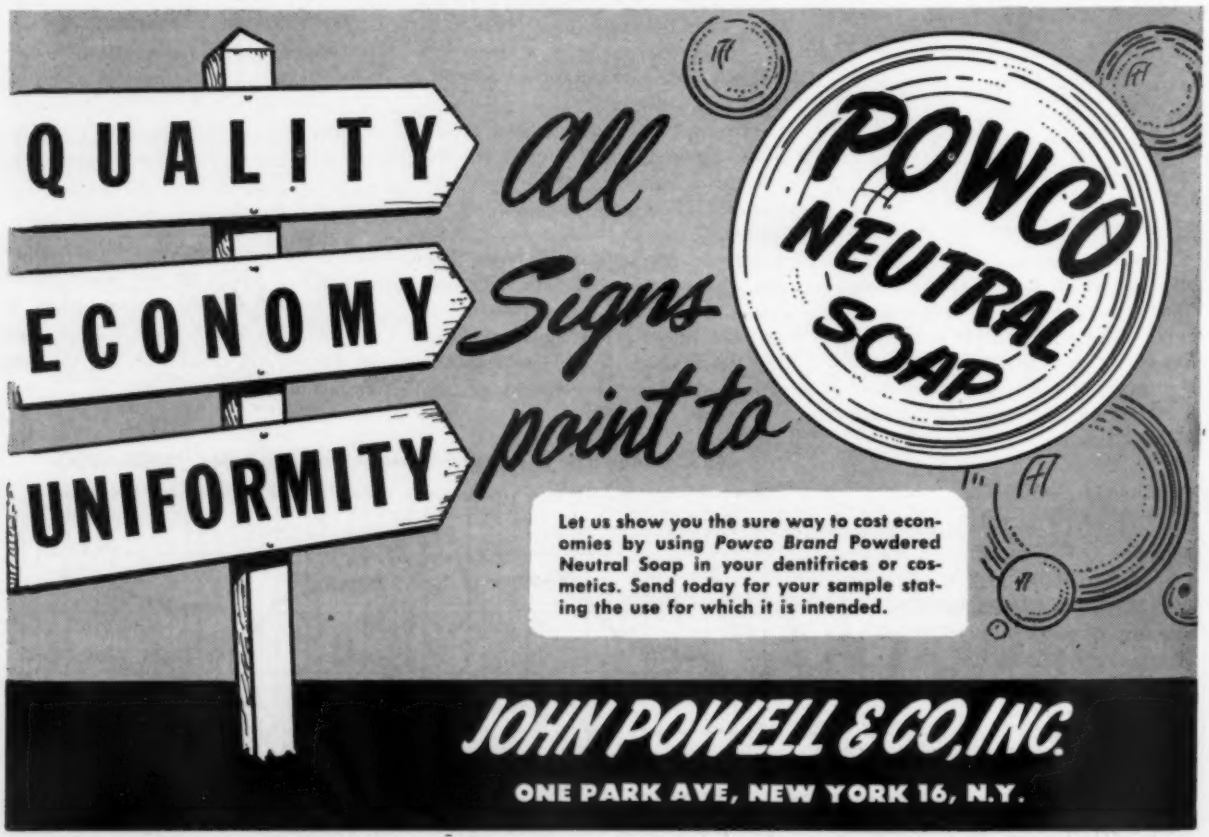
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A New Trade Mark Law

(*Continued from page 527*)

> adopted and used by a manufacturer or merchant to identify his goods and distinguish them from those manufactured or sold by others."

This definition should be taken in connection with Section 2 (f) which provides:

> "(f) Except as expressly excluded in paragraphs (a), (b), (c), and (d) of this section, nothing herein shall prevent the registration of a mark used by the applicant which has become distinctive of the applicant's goods in commerce. The Commissioner may accept as prima facie evidence that the mark has become distinctive, as applied to the applicant's goods in commerce, proof of substantially exclusive and continuous use thereof as a mark by the applicant in commerce for the five years next preceding the date of the filing of the application for its registration."

This means that hereafter the registrant will not be limited to a word or a distinct design as a trade mark but may claim any other feature of his packaging such as the shape of a bottle, a distinctive decorative paper, distinctive type of labelling, etc. etc. as a registrable trade mark.

Furthermore, under the section of the Act just quoted if the applicant can prove that the mark such as a geographical word has become distinctive of his goods, he may also secure a registration under the principal register without the limitations to marks now registered under the Act of March 19, 1920.

7. The Act of March 19, 1920—Members of the industry will recall that many marks which could not be registered under the Act of February 20, 1905, were given a limited registration under existing statutes under the Act of March 19, 1920, which is repealed by the new law. As originally registered, these marks were of indefinite duration but, under the new Act existing registration under the Act of March 19, 1920, expire six months after the effective date of the Act—that is, Japuary 5, 1948, or twenty years from the dates of their registration, whichever date is later. Section 46 provides:

> "Registrations now existing under the Act of March 19, 1920, shall expire six months after the effective date of this Act, or twenty years from the dates of their registrations, whichever date is later. Such registrations shall be subject to and entitled to the benefits of the provisions of this Act relating to marks registered on the supplemental register established by this Act, and may not be renewed unless renewal is required to support foreign registrations. In that event renewal may be effected on the supplemental register under the provisions of section 9 of this Act."

This means that although the registrations under the Act of March 19, 1920, may not be renewed, such marks may now be placed upon the supplemental register. This supplemental register fulfills the same function as the original Act of March 19, 1920, that is, it makes provision for the registration of trade marks which are not eligible to registration on the principal register, but it should be noted that many of the marks now forced to be registered under the Act of March 19, 1920, can be placed upon the principal register as these become distinctive of applicant's goods in commerce.

Many of the important marks of this industry which are now registered under the Act of March 19, 1920, will now become registrable under the Principal Register provided for by the new Act.

8. Notice of Registration—The new Act considerably simplifies notice of registration. Under the present law, the registrant was required to put on his labels "Registered in U. S. Patent Office" or "Reg. U. S. Pat. Off." Section 29 permits either of these forms of notice or better still the letter R enclosed within a circle as sufficient notice.

> ". . . in any suit for infringement under this Act by such a registrant failing so to mark goods bearing the registered mark, or by a registrant under the Act of March 19, 1920, or by the registrant of a mark on the supplemental register provided by this Act no profits and no damages shall be recovered under the provisions of this Act unless the defendant had actual notice of the registration."

9. Fees—The cost of registration is somewhat increased. The government fee is $25.00 compared with the present government fee of $15.00. The government fee for filing a notice of opposition or application for cancellation is $25.00 compared with the sum of $10.00 for opposition and no fee for cancellation under the present statutes. The government fee for removing a mark registered under the Act of February 20, 1905, to the present register is $10.00.

Under the new Act also "the Commissioner may issue a single certificate for one mark registered in a plurality of classes upon payment of a fee equaling the sum of the fees for each registration in each class." This means that if an applicant uses a mark, say for perfumes, toilet waters and soaps, which would require two separate registrations under the present practice, he may now embrace both classes in one application, but the government fee would be double that for one class. This is not only a convenience, but may be an economy in some cases where foreign registrations are applied for and are based exclusively upon the content of the domestic registration.

10. Section 526 of the Tariff Act relating to the importation of goods bearing a mark owned by an individual, firm or corporation domiciled in the United States has not been repealed by the present law. The prohibition against the importation through the Customs of goods bearing marks conflicting with registered marks has been reenacted in the present law.

It should be noted that under Section 28

> "Registration on the supplemental register or under the Act of March 19, 1920, shall not be filed in the Department of the Treasury or be used to stop importations."

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11. Service and Certification Marks—These provisions are absolutely new. A "service mark" is defined as:

> "The term 'service mark' means a mark used in the sale or advertising of services to identify the services of one person and distinguish them from the services of others and includes without limitation the marks, names, symbols, titles, designations, slogans, character names, and distinctive features of radio or other advertising used in commerce."

In this industry, such service marks might include systems of hair-dressing, manicuring, physical culture or the like apart from the sale of toilet preparations per se.

A "certification mark" is defined as:

> "The term 'certification mark' means a mark used upon or in connection with the products or services of one or more persons, other than the owner of the mark to certify regional or other origin, material, mode of manufacture, quality, accuracy or other characteristics of such goods or services or that the work or labor on the goods or services was performed by members of a union or other or-organization."

A typical "certification mark" would be a mark used by, say, a regional organization of French perfumers or by a testing laboratory or the like.

12. Status of Present Registrations—The status of marks registered under the Act of March 19, 1920, has been discussed under No. 7. Section 46 (b) of the new Act provides:

> "(b) Registrations now existing under the Act of March 3, 1881, or the Act of February 20, 1903, shall continue in full force and effect for the unexpired terms thereof and may be renewed under the provisions of Section 9 of this Act. Such registrations and the renewals thereof shall be subject to and shall be entitled to the benefits of the provisions of this Act to the same extent and with the same force and effect as though registered on the principal register established by this Act except as limited in sections 8, 12, 14 and 15 of this Act. Marks registered under the 'ten year proviso' of Section 5 of the Act of February 20, 1905, as amended, shall be deemed to have become distinctive of the registrant's goods in commerce under paragraph (f) of Section 2 of this Act and may be renewed under Section 9 hereof as marks coming within said paragraph."

It should be noted that to avail the registrant of the incontestable revisions of the new Act mere renewal of marks registered under the Act of March 3, 1881, or the Act of February 20, 1905, is not sufficient, but affidavits pursuant to paragraph 5 must be filed. (See discussion under No. 5.)

13. It may be observed that in general the object of the new law is to harmonize the decisions of the courts regarding secondary meaning and the decisions of the Patent Office and to bring the registration law into closer correspondence with the actualities of the present law of unfair competition. How far this object may be said to have been attained by this legislation it is impossible to determine now and this awaits the gradual test of many of the provisions of the Act by the courts. The common law is not arepeled by this law whose benefits apply largely to marks registered or reregistered after July 5, 1947.

The effective date of the new law is July 5, 1947. Since every trade mark registered or unregistered is effected by this law, no trade mark owner should wait until this date before taking the necessary action with reference to the protection of his trade marks.

In brief, it is suggested that every trade mark owner take the following steps to safeguard his interests:

(a) Make a list of all registrations under the original Act of March 3, 1881 or February 20, 1905.

This is to determine whether you wish to reregister these marks in the Principal Register so as to take advantage of the incontestability clause of the Lanham Act or whether you are content to leave these marks or to renew same as provided for in the Act of February 20, 1905.

(b) Make another list of all registrations which you have under the Act of March 19, 1920. Many of these may now under the new law be fortified by registration in the principal register and will receive substantially the same status as so-called technical marks now registered under the Act of February 20, 1905.

(c) Be sure to make a list of all marks which you have *not* used for two years. Section 45 of the Lanham Act referring to abandonment has teeth in it and the Courts are bound to consider it in construing the question of abandonment.

It is for you to determine whether you are content to abandon these non-used marks or whether you consider same sufficiently valuable to assert your right to the same by continued usage.

(d) List all unregistered marks and include in this list not only the marks which you have previously considered trade marks but all symbols, devices, bottle shapes, bottle wrappers, emblems, ornaments, decorative papers and the like which under the new Act "have become distinctive of the applicant's goods in commerce." You may find herein geographical terms or descriptive words which by reason of five years exclusive use have become susceptible of registration in the principal register.

Make a list of all marks heretofore refused registration but which may possibly be registrable under the new Act as a concurrent registration or otherwise.

(e) Make a list of such service marks as it may be to your interest to register such as beauty treatments, hair treatments, advertising slogans and the like.

(f) Assemble for the consideration of your trade mark counsel a complete line of goods of your manufacture including bottles, labels, wrappers and cartons. Also assemble booklets, advertising material, posters, etc. where you intend to continue to use the motifs, slogans or material in same.

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Compounder's Corner

Sweat- and Water-Resistant Sunburn Preparations

Most sunburn ointments, note A. C. Giese and J. M. Wells (*J. Am. Pharm. Assoc.*, Scient. Ed. 35:208, 1946) are easily washed or wiped off. From some standpoints this is highly desirable, but for some purposes, where long and continuous exposure to the sun in humid climates is necessary and where it is not feasible to reapply the ointment periodically, a more permanent coating is desirable. On this basis the ideal sunburn preparation should satisfy the following requirements: It should (*a*) be easy to apply uniformly over smooth and hairy surfaces; (*b*) dry rapidly, leaving a film with no sticky or greasy feel; (*c*) resist the action of moisture but permit sweat and heat transfer; (*d*) resist mechanical rubbing; (*e*) wash off with soap and water; (*f*) remain stable under varying temperature conditions and after subjection to sunlight; (*g*) be nonirritating and nonsensitizing; (*h*) require only readily obtainable materials; (*i*) provide effective protection in relatively thin films.

No ideal preparation has yet appeared, but some fairly satisfactory ones have been made. Such sunburn preparations are generally mixtures of a number of compounds and contain: (*a*) a base or vehicle in which all the ingredients are incorporated; (*b*) a sunscreen, which selectively absorbs the sunburn radiations in sunlight; (*c*) a scattering or light-dispersing agent, such as titanium dioxide; (*d*) pigments to match the color of the skin; and (*e*) miscellaneous substances which serve either to modify the properties of other materials or to keep the ointment from spoiling.

A number of preparations were formulated and the value of the ointments in sunburn protection was tested by comparing the ratio of the dosage required in the control patch of skin. Tests to determine ability to resist sweating, water, and abrasion were then made on preparations found sufficiently satisfactory to warrant further study of some 100 formulations tried, a bentonite clay ointment, a stearate mixture base ointment, a vanishing cream, and an "ethocel" lotion, nearly all containing homomenthyl salicylate and in some cases also ethyl *p*-aminobenzoate as sunscreens and titanium dioxide as the pigment proved most satisfactory.

The formulas for these several ointments are as follows:

Bentonite Ointment

Homomenthyl salicylate	20.0
Titanium dioxide	10.0
Magnesium stearate	10.0
Mineral oil	5.0
Diethylphthalate	5.0
Sodium lauryl sulfate	0.3
Bentonite ointment	47.7
Pigment base	2.0

The bentonite ointment used in the above is made from bentonite 15 per cent and water 85 per cent.

Stearate Base Ointment

Homomenthyl salicylate	20.0
Ethyl-*p*-aminobenzoate	2.0
Titanium dioxide	36.0
Magnesium stearate	20.0
Butyl stearate	20.0
Pigment base	2.0

Vanishing Cream Preparation

Homomenthyl salicylate	20.0
Ethyl-*p*-aminobenzoate	2.0
Titanium dioxide	21.0
Magnesium stearate	12.5
Butyl stearate	12.5
Pigment base	2.0
Vanishing Cream	30.0

The vanishing cream used in the above was made up of:

Stearic acid	15.0
Cetyl alcohol	1.0
Triethanolamine	1.5
"Carbitol"	10.0
Distilled water	72.5

Ethyl Cellulose Lotion

Homomenthyl salicylate	20.0
Titanium dioxide	10.0
Pigment base	2.0
Talcum	20.0
Ethyl cellulose (4% "Ethocel" in alcohol)	48.0

This lotion has all the desired requirements, except that it is very hard to remove. The film left on the skin is quite permanent, resisting washing with soap and water but coming off readily with alcohol.

In all of these sunburn preparations the sunscreens can be added by simple admixture at any time. Homomenthyl salicylate is a viscous fluid and can be added to base or pigment. Ethyl *p*-aminobenzoate may be dissolved in alcohol or glycerin, if these are used in the preparations, or powdered more finely before incorporation with pigments or base.

The pigment base was made from:

Burnt umber	50.0
Red ferric oxide	25.0
Yellow ferric oxide	25.0

Unsaponifiable Fraction of Lanolin

Studies of the unsaponifiable fraction of lanolin, containing the most important constituents of this material, were made by D. Daniel, E. Lederer and L. Velluz (Bull. soc. chim. biol. *27:218, 1945*). *In their work, this fraction was dissolved in petroleum ether and passed through a column of aluminum oxide. The first filtrate contained a very small amount of a mixture of paraffin hydrocarbons. Successive fractions obtained by adsorption and elution contained: (1) a very small amount of unidentified, unsaturated, dextrorotary steroid ketones) (2) strongly levorotary, cholesta-3, 5-dien-7-one, comprising about 0.6 per cent of the original lanolin; (3) "isocholesterol" (a mixture of lanosterol, dihydrolanosterol, gamma-lanosterol, and agnosterol), amounting to 20 to 26 per cent of the lanolin; (4) cholesterol, 20 to 30 per cent of the lanolin; and (5) a mixture of dextrorotary substances amounting to 5 per cent of the lanolin. Lanolin also yielded 2 to 6 per cent of beta-cholestanol. The cholesta-3, 5-dien-7, one does not exist as such in lanolin, but is formed from esters of 7-keto-cholesterol during the saponification.*

Sodium Bicarbonate as a Deodorant

During work leading to the development of some easily applied, inexpensive product which could be used by the male as well as the female and would be primarily a deodorant rather than an antiperspirant, J. H. Lamb (*J. Investig. Dermatol.* 7:131, 1946) recalled that one of his friends had used plain sodium bicarbonate as an under arm deodorant and had found it non-irritating and very efficient. Following this lead, clinical studies on more than 90 persons have indicated that bicarbonate of soda is an

excellent underarm deodorant for common daily usage; its effects persisting through the entire day. As part of the tests, the treatment was tried on a series of cases of extreme bromidrosis. The sodium bicarbonate was applied to the auxiliary areas only. The effect was immediate. The room was cleared of any perceptible odor and most of the patients were extremely grateful for the suggestion of a cheap method of stopping the fetid odor of sweat. Following the use of sodium bicarbonate over periods of from four weeks to a year, no one has complained of any furunculosis resultant from a change in the bacteriostatic effects of sweat.

One dermatologist, C. C. Dennis, who cooperated in this study reported excellent results in all of his cases, but a few of his patients mentioned a slight stinging under the arms. For these, he diluted sodium bicarbonate as in the following preparation:

Oil of lavender	0.2
Rice starch	1.0
Magnesium oxide	5.0
Sodium bicarbonate	20.0
Talc, to make	60.0

Non-Staining Hair Creams

According to a note in The Chemist and Druggist *(146:31, 1946) many of the modern hair creams owe their popularity to the fact that they are oil-in-water emulsions and do not leave greasy stains on hats, etc. Greasiness is imparted by adding more oil. Two formulas are:—*

I

Diglycol laurate	20
Liquid paraffin	50
Water	70
Perfume	q.s.
Preservative	q.s.

II

Diglycol stearate	12
Liquid paraffin	35
Water	120
Perfume	q.s.
Preservative	q.s.

Pour the oil into the diglycol laurate mixed previously with the water, agitating continuously. Fixative properties may be increased by replacing a part of the water with 4 per cent. methyl cellulose solution, or a little tragacanth. Vegetable oils may replace liquid paraffin.

Coffee-Flavored Castor Oil Emulsion

Those who cannot take their castor oil straight will be interested in a method for making a coffee-flavored emulsion containing 40 per cent of the oil. As given in *The Pharmaceutica Acta Helvetiae* (20:320, 1945), the emulsion calls for the use of:

Castor oil	40.00 cc.
Saccharin	0.02 Gm.
Vanillin	0.04 Gm.
Absolute alcohol	0.44 cc.
D-enzymated acacia	10.00 Gm.
Tragacanth	2.00 Gm.
Extract of dry coffee (e.g. "Nescafe")	4.00 Gm.
Water, to make	100.00 cc.

Dissolve the saccharin and the vanillin in the alcohol, add to the castor oil and rub down with the acacia and tragacanth. Add 20 cc. of water to prepare the primary emulsion. To the remainder of the water add the coffee extract, mix, and make up to volume.

Hair Combing Cream

A basic formula for a combining cream, incorporating cholesterol, for use on bleached hair after washing, is given as follows in the May, 1946 issue of the Manufacturing Chemist and Manufacturing Perfumer:

Cholesterol	10 parts
Mineral oil	50 "
Lanolin	5 "
Cocoa butter	1 "

These should be melted together, treating as gently as possible, and to them should be added while hot:

Borax	5 parts
Water	1,000 "
Glycerine	50 "

Stirring should be continuous until cold. It is suggested that it may be necessary to use a preservative, such as sodium benzoate, in which case one per cent of this material should be sufficient. Of course, this basic formula is capable of further modification.

Sun Protective Compounds

An item in *The Perfumery and Essential Oil Record* (37:86, 1946) cites recent work which indicates that some derivatives of sulfanilic acid may be of importance in sun protective creams and lotions because they have an absorption band in the region of those wave lengths which are most injurious to the skin. Sulfapyridine-N-methylene sulfonic acid is given as an example. This substance is neutral in solution and is not absorbed by the skin; it has complete absorption at 260 mμ, decreasing to about 50 per cent at 310 mμ. It is stated that there is no absorption through the skin and that there is no danger of photosensitization or allergic reactions; it is claimed to be superior to umbelliferone acetic acid and salol.

Combined Sterilization of Medicaments

Since it is generally recognized that the sterilization of solutions at 80° C. is unsatisfactory by itself, K. Erne and S. Soderlundh (*Svensk Farm. Tidsskr.* 50:21, 1946) propose to combine such sterilization with chemical sterilization. In their opinion, the best bactericide is phenylmercuric nitrate, which at a concentration of 0.002 per cent, always gives a sterile solution after one hour at 80° C. It is assumed that the usual aseptic precautions are taken. Phenylmercuric nitrate is incompatible with scopolamine solutions, and in this case tricresol (0.15 per cent), phenol (0.3 per cent), or chlorbutol (0.5 per cent) may be used.

Coating Pills and Tablets

In an account of methods used for coating pills, tablets and granulates on a large scale, S. Kallrot (Farm. Revy. *45:69, 1946, through* Quart. Rev. Pharm. & Pharmacol. *19:208, 1946) observes that tablets are more difficult to coat than pills, as the coating tends to build up on the large surfaces, while that on the edges is liable to be rubbed off. Tablets should have as great a convexity as possible, and the thickness at the edges should be small. Such tablets are, however, difficult to compress, and in practice only a limited convexity is possible. The exterior of the tablet should be free from upstanding edges resulting from worn punches and dies, and from pits. If a high pressure is used in order that the tablets shall not break during the coating, it is necessary to add a larger proportion of agar or tragacanth so that the time of disintegration is not increased. The initial coating, or varnishing, often determines the whole subsequent course of the coating operations. Its object is to separate the tablet mass from the coating material so that water is not taken up by the tablet and extractive cannot pass into the coating. Plain sugar coating is hard and non-elastic, so that it cracks easily. This is avoided by the use of gelatin in the coating solution and starch in the powder. In some methods a thick coating liquid is used, in others a thin liquid with the powder added separately. The latter method has the advantage that the thin liquid is easily distributed uniformly over the tablets, while the addition of weighed amounts of powder gives good control over the stickiness of the layer.*

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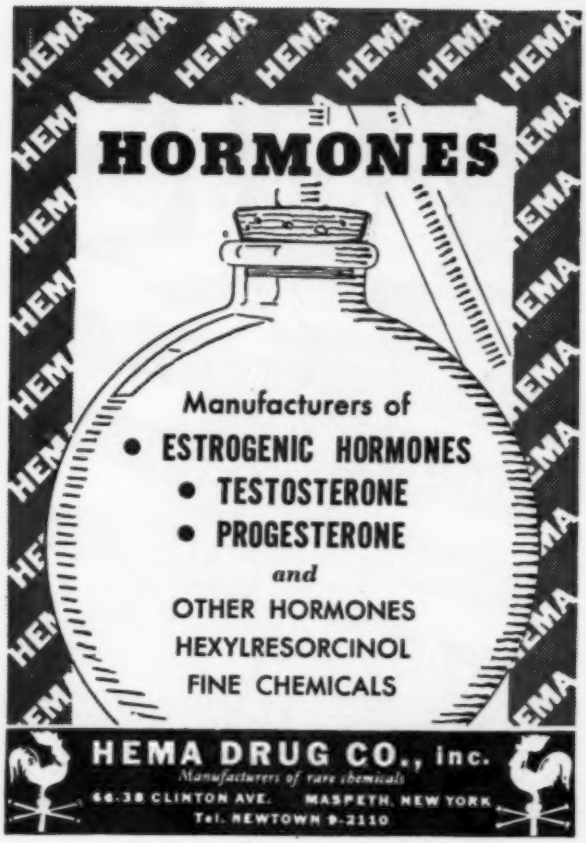

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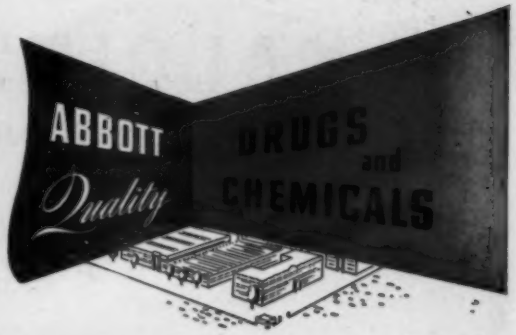

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Atomic Energy in Medicine

(Continued from page 482)

mucous membrane of the gastrointestinal tract, the use of radioactive sodium has made some drastic changes of ideas in this field. In other work,[20] the mechanism of shock from burns and trauma has been traced with radiosodium. With both potassium and sodium as the tracers, important data has been obtained, not only on the physiology of the glands associated with water metabolism,[5] but also on other important physiologic processes.[21]

Radioactive iron has brought new knowledge to the field of hematology and has led to a clearer understanding of the factors involved in the production of iron deficiency anemias.[22] The radioisotopes of calcium and strontium have both been employed in studies of the intermediary metabolism of bone, the physiology of lactation, and other metabolic processes.[23, 24] Incorporating radioactive sulfur into synthetic thiamine has provided new knowledge concerning the physiology of this vitamin.

A number of other radioisotopes have been or will be studied to determine the function of the elements in various vital physiologic processes. There are numerous elements in the body which are required in very small quantities and whose exact function is not clearly understood. It is believed[6] that elements like copper, boron, manganese, cobalt and the like can be investigated better with radioactive isotopes than by other methods.

In the field of pharmacology, the use of radioactive isotopes offers many important potentialities. As has been done in a few instances, it should be possible to follow the course of drugs, determine their distribution and rate of excretion and thereby gain a more comprehensive insight into why and how they act.[8, 25] It is also possible, by such methods, to determine the effects of certain drugs on specific elements in the body. Thus, with radioactive iodine as an indicator, several investigators[26, 27] have obtained considerable information on the influence of potassium thiocyanate and thiouracil on the utilization of iodine-containing compounds by the thyroid gland.

An example of the use of radioactive indicators that should interest pharmaceutical manufacturers is a procedure employed in studies of enteric coatings and intestinal absorption. In the method described,[28] radioactive materials, used as fillings for enteric coated pills or capsules, proved suitable for detecting any cracks in the coatings. Such a break is detected at once by the appearance of the radioactive material in the blood stream as measured by the activity in the hand. The capsule is followed through the digestive tract with the aid of a movable, bell-type counter.

Of kindred interest is a radioactive method of testing absorption from ointment bases, developed by Johnston and Lee.[29] In their investigations, sodium chloride, activated in a cyclotron, was incorporated into various ointment bases. A portion of the base was rubbed on

the right arm, and after definite intervals, each subject was tested for radioactivity by the use of Geiger counter applied to the left hand. Some very interesting and informative data was thus obtained.

The diagnostician will also undoubtedly find radioactive materials very useful aids in differentiating various pathological conditions. Indeed, Curtis[8] believes it quite possible that within a few years radioisotopes will be used for routine hospital tests for such things as intestinal absorption, or liver or kidney functions. Already in use, however, is the knowledge that the uptake of radioactive iodine by the thyroid is characteristic for various pathological conditions of that gland.[30, 31] More recently, radioactive sodium has been shown to be very helpful in diagnosing the extent of defective circulation in peripheral vascular diseases, like arterio-sclerosis, Raynaud's disease, sclerodermia, immersion foot, frost-bite, thrombo-angiitis obliterans and the like. With this technic, tested in over 200 cases, Smith and Quimby[32] were able to follow the progress of the various diseases, decide the most suitable treatments, and determine the efficacy of the therapeutic measures.

Radioactive elements have already begun to prove their value in the treatment of various diseases, but[4, 33] the use of such substances in the field of therapy is one that still requires a great deal of painstaking work. As pointed out by Hahn and Sheppard,[12] one major advantage of therapy with artificially radioactive isotopes is that a judicious choice of chemical elements is permitted, and through proper selection radiation may be localized in certain parts of the body.

Iodine, for example, is selectively taken up by the thyroid. On this basis treatment of hyperthyroidism with radioactive iodine has been carried out by several groups of workers.[18, 19, 34, 35] In discussing this advance, Compton[17] remarks that, having determined the quantities of iodine absorbed in the thyroid gland in earlier experiments, the next step was to introduce quantities of radioactive iodine of sufficient amount to have localized therapeutic effect because of the radioactive radiations admitted locally from the iodine right into the thyroid gland itself. A number of patients have thus been treated with good results.

An editorial[36] in the *Journal of the American Medical Association* summarizes the present status of this form of treatment. Referring specifically to the recent reports of Hertz and Roberts[18] and of Chapman and Evans,[19] it is noted that "From the evidence thus far available it would appear that treatment with radioactive iodine can produce remissions in cases of thyrotoxicosis associated with hyperthyroidism." However, it is stressed that much more data must be accumulated before it can be said that radioactive iodine is superior to surgical or other drug treatments. The possibility that treatment with radioactive iodine may prove superior make further study most desirable.

A good deal has been said, much of it conjectural, about the potentialities of radioisotopes in the treatment of cancer. Although, at the present stage, it does

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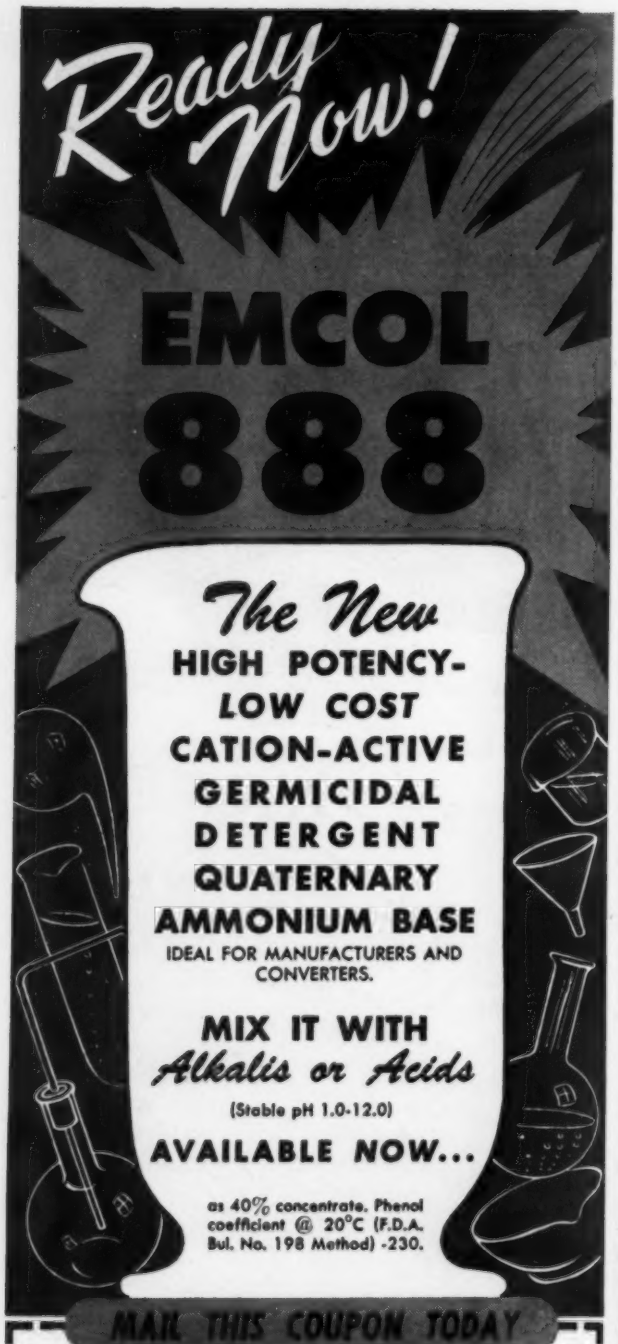

not appear that such materials will replace current methods of therapy, there is no question but that these radioactive substances provide powerful tools to further advance the fight against cancer. Much work has been done[37, 38] and is being done in the field, and the availability of more material from the uranium piles should greatly stimulate investigation.

One possible line of study has been suggested by Stone.[9] He points out that one of the hopes for the future is that some chemical may be found which lodges, more or less selectively, in cancer cells. If such a chemical is not by itself able to kill the cancer, then a radioactive element may be attached to it and thus a more effective means of treating cancer, superior to any hitherto available, may be developed.

In the meantime positive proof that radioactive phosphorus (P32) is effective against certain kinds of cancer was presented by Low-Beer[39] at the June, 1946 meeting of the American Radium Society in San Francisco. Cautioning against too high hopes, he pointed out that the treatment is applicable only to superficial skin cancers and warts. In cases of basal cell corcinoma, the treatment was 98 per cent effective, tumors being removed in 51 of 52 patients. For hyperkeratosis, the treatment was 100 per cent effective in 36 cases. A total of 301 patients with cancer and warts were treated with the new technic, and about 100 more are still being observed.

After trying various methods, Low-Beer found that the most satisfactory technic is to put a solution containing radio-phosphorus on ordinary blotting paper with an eye dropper. The paper is cut to fit the tumor and it is applied like a bandage with adhesive tape. The treated paper remains in place for a period of up to five days; depending on the amount of radiation required. At the end of the treatment period, an erythema appears, increases in intensity, but gradually disappears with the tumor.

Considerable promise and some definite success has resulted from the use of radioisotopes in treating certain diseases of the blood. Outstanding results have been obtained from the use of radioactive phosphorus in the treatment of polycythemia vera, a disease in which the bone marrow puts out an excess of red blood cells so that the circulating blood becomes too thick to flow normally through the capillaries. Already used in a large number of cases,[40] the administration of radiophosphorus or P32 causes the bone marrow to act in a more normal manner. Now considered to be of established value,[41] there are those[5, 42, 43] who believe that this kind of therapy is the best available treatment for polycythemia vera.

Radioactive phosphorus is judged to be at least as effective as other forms of therapy, such as X-rays, for treating chronic forms of leukemia, a disease sometimes called cancer of the blood and characterized by an abnormal production of white blood corpuscles. Offering certain definite advantages, such as avoidance of radiation sickness, doses of radio-phosphorus must be carefully individualized to avoid certain undesired

side-effects.[43] It seems quite likely, according to Chamberlain,[5] that as radio-phosphorus becomes more abundant it will more or less completely supplant X-ray therapy in this disease.

Recently Hahn and Sheppard[2, 44] reported the results of their investigations of a highly dispersed sol of radioactive colloidol manganese dioxide. Their preliminary work indicates that this material, administered by vein, shows promise in the radiation therapy of Hodgkin's disease, chronic and subacute lymphatic leukemia, monocytic leukemia, lymphosarcoma, and such conditions involving the reticulo-endothelial system.

During the war, radioactive iron performed an important task in determining the best methods for preserving whole blood and for setting up the technical standards for the vital blood donor program. With similar technics, several other extremely important investigations were carried out. For example, new discoveries were made regarding the interaction of various blood types which not only greatly safeguarded blood transfusions but which also proved to have application in certain situations in childbirth and surgery.[17]

There is little doubt that radioisotopes will prove very useful in the field of radiation therapy.[8] Indeed Stone[6] has suggested that radioactive materials from atomic piles may serve as substitutes for radium. Thus, elements such as tantalum and cobalt can be placed in the pile and made radioactive in such a way that they give off gamma rays of high energy. By this means it would be possible to make treatment bombs of great energy as compared with present small bombs of radium. There is also the possibility that needles could be made of tantalum and kept activated in a pile until desired for use, as for example, in interstitial therapy. It is also very probable that radiations of different penetrations will be available from different radioelements so as to provide materials to meet various therapeutic requirements.

Thus it is evident that as atomic energy is turned to peaceful purposes, all mankind will benefit from the careful and thorough work that is well on its way. The future seems to hold unlimited possibilities for the application of radioisotopes to scientific problems. As Evans[4] has said: "There is no question that the slow release of atomic energy in radioactive isotopes will have many and varied applications in medical research and the treatment of disease."

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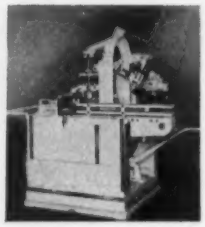

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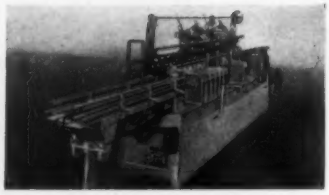

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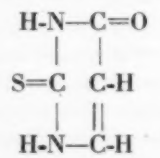
Trends in Modern Medicinals

(*Continued from page 485*)

dium sulfathiazole, sesquihydrate and 0.125 per cent *dl*-desoxyephedrine hydrochloride. Anhydrous sodium sulfite 2 per cent is added as a preservative. Some of these drugs now available on the market are: Squibb's Sulmefrin, Abbotts' Sulfedex, Parke-Davis' Sulfamone and Lilly's Thizodrin. A similar product containing 1 per cent of sodium sulfathiazole and 1/10 per cent *dl*-desoxyephedrine hydrochloride is employed in epidemic conjuctivitis. It lesens the congestion causing vasoconstriction.

Hyperthyroidism

Several years ago it was noted that rape seed contained a goitrogenic principle. When extracted and analyzed this principle was found to be a derivative of thiourea. Further studies of thiourea revealed a compound which was a heterocyclic derivative and was called thiouracil. Its clinical formula is 2-mercapto-4-hydroxypyrimidine. Structurally it is as follows:



Thyrotoxicosis is that condition which occurs when an over-function of the thyroid gland in the body causes an excessive amount of thyroid hormone (thyroxin) to be produced and released. This is manifested by an increased metabolic rate; various nervous effects; loss of weight; sometimes an increased pulse rate; and other symptoms. In many cases the condition is not serious enough to require hospitalization but when the condition becomes too serious the only therapy available has been subtotal surgical resection of the gland or partial removal. Such a condition makes a patient a poor surgical risk due to the high metabolic rate. Thiouracil when administered lowers the metabolic rate to normal levels, causes return to normal of the protein-

bound iodine of the plasma and concurrently a clinical remission of the disease. Therefore, this drug is employed preoperatively or in place of surgery.

It is contraindicated in pregnancy and lactation since it passes through the placental barrier. It is to be given under strict control and on prescription only, with a warning label as to the possible side effects. The principle side effects which have been observed were most all due to drug allergy. This drug has one drawback in that it sometimes causes agranulocytosis. Thiouracil is available under that name from Abbott Laboratories, Eli Lilly and Co., E. R. Squibb and Sons, William H. Rorer and Winthrop Chemical Co. Lederle Laboratories have named their thiouracil, Deracil.

There have been reported hyperthyroid patients who have not responded to other forms of treatment or who have been sensitive to iodine or thiouracil.

Roentgen treatment as well as ordinary iodine by mouth have been used in treating hyperthyroidism for many years with some success. With the introduction of radioactive isotopes of iodine it was thought that the beta rays from iodine if rendered radioactive, would provide a greater radiation effect than that furnished by Roentgen rays which had to pass through the skin and tissues, since the thyroid gland does selectively absorb iodine. Consequently, studies were begun on the use of radioactive iodine. Clinical trial has shown that therapy with radioactive iodine is of value. The radioactive iodine is administered orally in about 1 mgm. or less in ordinary iodine. The radioactive iodine is found to concentrate mainly in the thyroid gland. The beta rays furnish an internal radiation similar physically to Roentgen radiation.

The radioactive iodine is prepared by the nuclear bombardment of metallic tellurium which transmutes tellurium into iodine. The radioactive iodine is then separated from the target by adding to the metallic tellurium 0.5 mgm. of iodine as potassium iodide and 25 cc. of three molar sulfuric acid. The solution is heated while adding concentrated nitric acid a drop at a time. Thus, the target is dissolved and the iodine distilled over as elementary iodine and collected in carbon tetrachloride. The carbon tetrachloride solution is washed once with water in a separatory funnel, the iodine reduced with sodium bisulfite and extracted in an aqueous layer as sodium iodide. The aqueous solution is then filtered to remove any droplets of tetrachloride. The preparation is administered to the patient within one to four hours after the bombardment because of the rapid deterioration. The solution as administered to the patient is distilled water containing fourteen to seventy-nine millicuries (a millicurie is 37,000,000 atoms disintegrating per second) of twelve-hour iodine and approximately one-tenth of that quantity of eight-day iodine in 0.5 mgm. of iodine as sodium iodide.

Allergies

The subject of allergies, particularly to the spring pollens and the ragweed, have been a matter of con-

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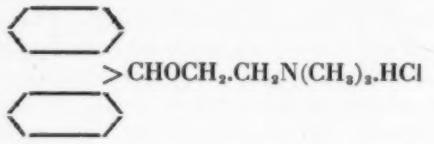
troversy for many years. No cure has been found for these conditions. A new drug, recently released, chemically is beta dimethylaminoethyl benzyhydryl ether hydrochloride and is sold by Parke, Davis as Benadryl. Its structure is



It acts as an antispasmodic and an antihistamine substance. It is a white crystalline powder forming a slightly opalescent solution. It is soluble in water and alcohol and stable under ordinary conditions of temperature and pressure. It possesses three significant actions as observed on aminals; (1) it alleviates the bronchial constriction caused by histaminic or anaphylactic shock; (2) it counteracts the vasodepressor effects of histamine; and (3) relieves the spasm of smooth muscle. Many of these symptoms of anaphylactic or a lergic reactions are believed due to the liberation of histamine. It is thought, therefore, that the therapeutic efficacy of Benadryl in allergic conditions could be due in large measure to interference with the action of histamine. It is believed that Benadryl acts by being adsorbed onto the site of action of histamine and thus histamine has less opportunity to reach and combine with its site of action. There is apparently a competition between the two substances. Benadryl is indicated in the treatment of edema problems having as a common etiologic agent the release of histamine or histamine-like substances. In urticaria it relieves the condition but does not cure it. It has also been employed with success in high fever serum-sickness, pylorospasm, spastic colitis, dysmenorrhea and in the physical allergy of the head syndrome which includes perennial vasomotor rhinitis, myalgia, Meniere's disease, and vasodilating pain. It has been employed in bronchial asthma but has not been found very effective. In children it has been employed in the treatment of hay-fever, asthma, vasomotor rhinitis, urticaria and serum reactions. The main side reactions encountered with this drug are sleepiness, dizziness, dry mouth and a feeling of nervousness, all of which passed very quickly. The sleepiness at night is not too objectionable in hay-fever patients since they usually have difficulty in sleeping. Amphetamine administered during the day with the Benadryl has been found to overcome this side-effect. A possibility of a use for Benadryl in gastric acidity has been advanced. Histamine increases gastric acidity. Benadryl depresses this gastric response to histamine and thus may some day prove to be a new factor in the control of gastric acidity. The dose of Benadryl is 50 mgm. three or four times a day. Where a persistent narcotic effect is noticed, smaller doses should be given. The effect lasts from five to eight hours. It is available in capsules and as the elixir.

Anthallan, known chemically as the lactone of beta-

gallic acid-ethanol-alpha-di (N-butyl) amine, is derived from the aminized phthalides. It is made available by the Medico Chemical Corporation of America and is indicated in nonseasonal hyperesthetic rhinitis, urticaria, papular urticaria and neuro-dermatitis disseminata. It is administered in doses of three to twelve capsules (0.085 Gm. each) daily. It appears safe for human use since its toxicity is extremely low. Excellent results are claimed to have been obtained in a high percentage of cases of seasonal and non-seasonal hyperesthetic rhinitis in the few cases reported so far in the medical literature, but further clinical study seems indicated.

Amino Acids

The subject of amino acids is a very lengthy one which will be dealt with briefly, in this review. An essential amino acid is defined as one which cannot be synthesized by the animal body at a rate commensurate to meet its needs for normal growth. Certain amino acids are essential for growth, maintenance and physiologic well being. Those found by various workers including Rose to be essential for the rat are:

Essential	*Non-essential*
lysine	glycine
tryptophan	alanine
histidine	serine
phenylalanine	norleucine
leucine	aspartic acid
isoleucine	glutamic acid
threonine	hydroxyglutamic acid
methionine	proline
valine	hydroxyproline
arginine	citruline
	tyrosine
	cystine

In humans only eight are essential, histidine and arginine being in the non-essential list. It must be understood, of course, that the non-essential amino acids are not necessarily unused by the body, but they are the ones which the body itself, can, if required, manufacture. Amino acid therapy is indicated for the optimal growth and tissue repair in health as well as in disease. It is indicated in hypoproteinemia of nephrosis, nephritis, neoplastic diseases, ulcerative colitis, hyperthyroidism, hepatic insufficiencies; in anemia; pregnancy and lactation; burns, ulcers; kidney diseases; preoperatively and postoperatively to protect the liver from the damaging effects of anesthetics; and in reducing the post operative loss of nitrogen. It must be remembered that the amino acids are not a substitute for blood, serum or plasma transfusions in acute severe hypoproteinemia and shock.

The amino acids products on the market are available for oral and for parenteral use. Arlington's Aminoids are a granular powder for oral administration. Parenamine, marketed by Frederick Stearns is a 15 per cent solution for parenteral administration. Mead Johnson's Amigen is marketed as the powder for oral use and in a 5 per cent solution with 5 per cent dextrose for paren-

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•

The more we think of Ernest Bevin's views on the Middle East the more convinced we become of this: Not even the British Labor Party can make the traditional Unicorn out of a horse's neck—if you'll pardon the dislocation.

•

Stamping the United Nations a failure is as unreasonable as saying eugenics is not scientific because the test tube hasn't replaced the Fallopian.

•

Between Milton Berle and Joe E. Lewis there oughta be a song on those Peace Conferences. As a title we'd suggest, "Things Are Tough With Molotov." Then, of course, there's always the Hearstian gem, "There's A Gremlin in The Kremlin."

•

The world's confusion isn't localized to politics. It's even worse in show business, with producer Billy Rose writing a newspaper column and columnist Sidney Skolsky producing "The Jolson Story." As that sage of enigmatic English, Jimmy Durante, says: "Everybody's tryin' to get into the act!"

•

After that beer incident in Czechoslovakia it's a cinch no one will ever again offer to buy UNRRA Chief La Guardia a drink. And it ain't because it might stunt his growth.

•

The way Congress is going these days, a guy won't be qualified to hold public office unless he's first run a private detective agency. It's getting so, a Congressman doesn't know whether he's working on a sub-committee or a subsidiary of the FBI.

•

Things are improving anyway. Seems like only yesterday, when the neighborhood grocer wouldn't swap a pound of butter for a pound of Ambergris. And there were times when the latter tasted better than the former.

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teral administration. Nutramigen is also a powder and contains other substances such as olive oil, starch, calcium gluconate, dextri-maltose, yeast and mineral salts. National Drug has made available three products which are known as Aminonat, Aminovite and Amiron. The first two mentioned are powders and the third is a liquid. Aminovite contains vitamins and minerals and Amiron contains vitamins and iron. Lactamin is also a powdered protein hydrolysate being manufactured by Wyeth, Inc. Sharp and Dohme has recently made available Delcos Granules which is not a protein hydrolysate but simply a protein concentrate.

Co Tui has done a great deal of work on the amino acids. Among his studies was evolved a new treatment for peptic ulcers. The amino acids were administered to patients suffering from peptic ulcers. The results observed include a cessation of pain and distress and vomiting. A positive nitrogen balance was established and a gain in weight, strength and morale occurred. One might ask at this point just how this works. The amino acids are amphoteric substances and the addition of these substances to a hyperacidic gastric juice raises the pH to almost the point of abolition of peptic activity. The pH of gastric juice originally between 1.92 and 2.05 was raised by amino acids to 4.24. The free acid present was reduced to zero for about an hour and fifteen minutes. After that the pH again began to drop and the free acid to rise. It is believed that healing in these cases is aided by this neutralization of the acid along with the providing of a rich nutrient solution to enable the body to build up its tissue deficiency.

Wyeth, Inc., has just recently released a product known as Meonine in the form of crystals and tablets. This, the amino acid methionine, is a specific for the prevention and repair of liver damage associated with many clinical conditions and toxic damage produced by such poisons as carbon tetrachloride.

Controlling Bleeding in Surgery

The Upjohn Company have recently made available materials for a new technic for surgical hemostasis. These materials are known as Gelfoam and Sterile dried beef thrombin. The study of the coagulation mechanism of the blood has resulted in the production of clotting without injuring the surrounding tissue. Clotting of blood can be conceived of as taking place in three steps as follows:

1. Thromboplastin is released from injured tissue cells and from blood platelets when the latter come in contact with a foreign surface.
2. Thrombin is formed by the reaction:
   Thromboplastin + Calcium ions + Prothrombin → Thrombin
3. Fibrin is formed by the reaction:
   Thrombin + Fibrinogen → Fibrin

The end result of the first two steps of this process is thrombin which directly converts fibrinogen to fibrin. Therefore, application of thrombin to the bleeding point will cause clotting promptly. One of the difficulties of using the thrombin solution as a hemostatic is the

necessity for using in conjunction with it an absorbent material such as cotton. When bleeding occurs in a wound that must be closed it is necessary to remove the cotton but the clot is very often removed with it and bleeding is again started. For this purpose a sponge-like material known as fibrin foam was prepared from human fibrin. It could be saturated with the thrombin solution, applied to the sight of hemorrhage and allowed to remain there after closing the wound since it was readily absorbed by the tissues. Unfortunately, only moderate supplies of both fibrin foam and thrombin made from human blood have been made available. For this reason research was conducted to develop Gelfoam and thrombin from animal sources. Gelfoam is a spongy substance of partially denatured gelatin that has proven not only as satisfactory as fibrin foam, but in a number of respects actually superior to it. It is a glistening white porous mass that when dry can easily be cut into any desired shape with a sharp knife. When moistened with thrombin solution it becomes absorbent and pliable; wet, it adheres readily to the bleeding area, forming, after it is held in place for a few moments, an actual patch on the injured surface.

Of special interest and importance is the fact that the absorbent properties of Gelfoam cause it, when it is applied to a bleeding surface, to soak the blood into its own interstices so that the clot formed is largely in the Gelfoam. Thus no thrombin spreads into the opened vessels and thrombosis does not occur.

Gelfoam is readily absorbed by the tissues and does not cause any excessive inflammatory action. The thrombin is beef thrombin and its repeated use in man as an hemostatic agent fails to produce detectable antibodies and in practice has never caused sensitization, agglutination or other unfavorable reactions. Although the usefulness of these two substances is not limited to neurosurgery they have been used more extensively in this field at the present.

After several years of intensive research Johnson and Johnson investigators have developed a hemostatic agent to control bleeding during surgical operations.

The new product, to be known as "Hemo-pak" when available commercially, is derived from a raw material called alginic acid extracted from seaweed. It will be produced in a gauze-like form and may be left in the body and the patient sewed up, after which the hemostatic agent is ultimately absorbed and carried away by the tissue fluids.

Soluble cellulose has also been suggested as a hemostatic agent. Lederle Laboratories and Parke-Davis and Company have done considerable work on this material. The oxidized cellulose disappears readily in the tissues without tissue reaction. It may be used also as a carrying material for thrombin in cerebral surgery.

Microbiotics

A great many advances have been made in the microbiotics in the past year. Bacitracin was recently isolated from a strain of *B. subtilis*. It was first ob-

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served following studies of the bacterial flora of contaminated civilian wounds.

Direct blood agar plating of the injured tissue revealed organisms which did not show in broth cultures. They occurred most frequently when broth cultures contained certain sporulating Gram-positive rods. This antibiotic agent was found to be neutral, non-toxic and water soluble. Tests have shown that it may prove to be a valuable agent in the treatment of gas gangrene, gonorrhea and meningitis as well as hemolytic streptococcal infections.

Streptomycin has recently been released for limited civilian use. Much remains to be learned concerning limitations of streptomycin's usefulness, methods of administration, dosage and toxicity.

Studies are being carried out on the following list of diseases in which streptomycin has shown some promise:

1. Gram-negative bacillary infections of the genitourinary tract resistant to the sulfonamides.
2. Gram-negative bacillary infections with bacteremia.
3. Hemophilus influenzae infections, including meningitis, pneumonia, middle ear disease and laryngotracheitis.
4. Friedlander's bacillus (Klebsiella pneumoniae) pneumonia.
5. Typhoid.
6. Salmonella infections (paratyphoid).
7. Acute brucellosis with bacteremia.
8. Tularemia.
9. Bacterial endocarditis due to Gram-negative bacilli.

The following diseases are not being investigated at the present:

1. Chronic idiopathic ulcerative colitis.
2. Lupus erythematosis acutus disseminatus.
3. Leukemia.
4. Cancer.
5. Fever of unknown cause.
6. Rheumatic fever.
7. Rheumatoid arthritis.

Some cases of tuberculosis are being treated but until the supplies are more plentiful the program is rather limited.

The development of penicillin and penicillin products has advanced rapidly since its release for unlimited civilian use a year ago. Since that time many dosage forms have been placed on the market. These include tablets, pastilles, ointments and various parenteral forms. Several vehicles such as Emulgen of Lakeside Laboratories and Solvecillin of Solvecillin, Incorporated, have been placed on the market. So much literature has appeared on these preparations that they will not be discussed here.

Recent reports have shown that of the four types of penicillin contained in the commercial products now available, one (penicillin K) has a lower therapeutic activity. These penicillins (F, G, K and X) differ slightly in the nature of a side group attached to their common chemical nuclear structure.

Most commercial penicillins at first consisted largely of penicillin G. Later studies of products produced by different strains of *Penicillium* and under varying processes revealed the presence of the other types, F, K, and X. Their reported bactericidal activity *in vitro* varied, against *Staphylococcus aureus*, *Spirochoeta pallida*, and hemolytic streptococci. *In vivo* results in experimental syphilis did not bear out the expected relationship. For a period, because of the pressing demand for more and a purer penicillin, producers began obtaining a penicillin higher in K content.

Penicillin K is apparently excreted and destroyed more rapidly than the others and is therefore relatively ineffective (about 1:10 in comparison with F, G, and X) against syphilis and other infections. Chesney found pure penicillin K of no value in syphilis in rabbits.

The need for minimizing the content of K in commercial penicillins is now recognized. Standardization of impure penicillin mixtures by some method other than *in vitro* bactericidal activity seems necessary. However, commercial penicillin is, the best and safest treatment of syphilis yet devised. Patients who have been treated with it during the past several years and their doctors need not be alarmed over recent sensational reports of its being ineffective. This is particularly true of the usual range of infections and primary stages of syphilis. Commercial penicillin has not consisted of pure K. However, it is possible that the presence of K in penicillin may account for resistance to penicillin which some organisms have developed and the difficulty in curing subacute bacterial endocarditis with penicillin.

Resistance

Aware of the growing importance of acquired resistance to chemotherapy on the part of infectious micro-organisms, the medical research workers and practitioners have studied the problem. Development of "fast" or drug-resistant organisms was noted to an appreciable extent for the first time in connection with the sulfonamides.

An organism may be normally susceptible to chemotherapy such as by the sulfonamides. Occasionally, strains of micro-organisms have been noted which seem to have or to develop an immunity to this chemotherapy. The immunity is selective. It is believed to be brought about by continued exposure of the strains to amounts of the drug insufficient to inhibit or destroy their growth. When this occurs, sulfonamide-resistant and a drug-resistant strain or drug-fast organism is produced.

Most chemotherapeutic agents have produced at some time, resistant strains. This resistance is usually transitory but in some cases the fastness is permanent. The danger from sulfonamide resistance was somewhat eliminated by penicillin therapy. However, penicillin-resistant strains are now being reported. Strains of organisms resistant to sulfonamides are usually amenable to penicillin therapy and in turn penicillin-resistant organisms are usually amenable to treatment

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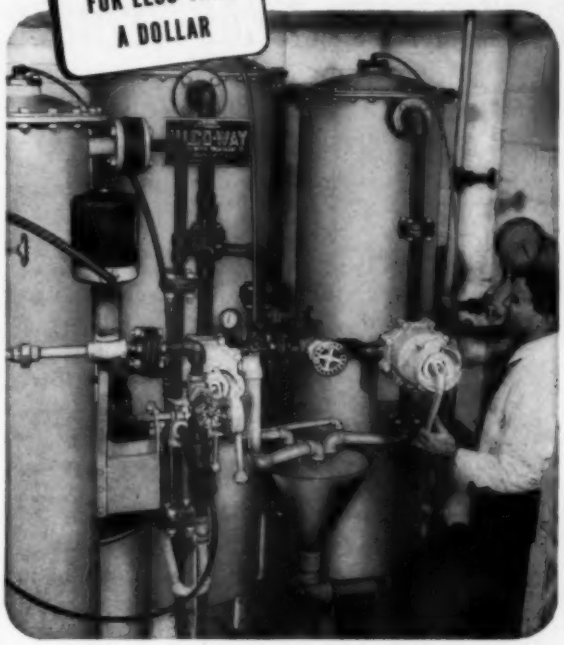

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by sulfonamides. No extensive studies have been reported concerning resistance to streptomycin but it is believed that this drug will not differ in this respect from penicillin. The rate of development of resistance to streptomycin as noted in a few studies was much faster.

Infections with streptomycin-resistant strains continued *in vivo* and could not be controlled by the largest doses of the drug tolerated by animals. However, again a selective resistance was noted and it was observed that *in vivo* and *in vitro* strains resistant to either penicillin or streptomycin were found susceptible to the other.

These observations suggest that streptomycin and penicillin act on these micro-organisms in quite different ways. This conclusion is supported by three other differences in the behavior of gonococci and meningococci toward streptomycin and penicillin: (a) the more rapid acquisition of streptomycin resistance, (b) the absence in streptomycin resistant gonococci and meningococci of the gross physical change and abnormal microscopic appearance of penicillin resistant micro-organisms and (c) the retention or even enhancement of virulence of meningococci after acquiring streptomycin resistance, whereas the development of penicillin resistance tends to lower their virulence somewhat.

Although in clinical fields naturally streptomycin-resistant strains as yet have not been reported, it is possible that such will ultimately develop.

Physicians and pharmacists interested in streptomycin as an effective agent for the treatment of specific indicated conditions will carefully provide against the administration of insufficient doses. The administration of penicillin, the sulfonamides and now streptomycin seems to require adequate dosage. When quantities are insufficient to accomplish therapeutic objectives, the results are as dangerous as the infection.

It is apparently axiomatic in therapy with the antibiotic agents that dosage must be adequate to accomplish the desired end result of inhibition or destruction of the infectious organisms. If the quantities of the drugs employed are not "in excess" of the required therapeutic quantity, either through ignorance on the part of the prescriber or false economy in limiting the amount of the drug used, serious damage to the welfare of the patient will result, and the development of resistant strains is almost inevitable.

United-Rexall

(Continued from page 487)

The Opportunity Unlimited plan is presented in an impressive, multicolored package that is a virtual textbook on retail drug store operation. The Rexallite is reminded that the retail drug business is going through an important period of change. The days ahead will see the growing acceptance of mass and departmentalized merchandising promoted in true superstore fashion. The

United-Rexall study has revealed that the future of the drug store is linked to a considerable degree with the superstore. Dart and assistants honestly believe that the superstore will dominate the retail drug business in many communities. They feel that the way to hold leadership is to set the pace. They recommend that the Rexallite should step into the trend and if possible even get ahead of it. The United-Rexall organization looks on the superstore as a great opportunity and not a defensive measure. It is felt that the Rexallite is in a position to beat the chain store, the independent superstore or competition from any quarter by giving his community a much better drug store service. The ingredients for success are described as enterprise, careful planning, imagination and the willingness to dig out of the old groove and put a lot of energy into fresh effort. The Rexallite is reminded that his purchasing power in a single Rexall store is the strongest collective purchasing power that exists in the retail drug trade today. This is made possible by his Rexall franchise.

Opportunity Unlimited emphasizes to the Rexall independent that he now has at his command and at no cost to him a complete service for the establishment and operation of a superstore. The service is described as extending from information on where to locate a store all the way through to design, layout, equipment and financing. It even includes the drug side and fountain fixutres. the purchase of both standard and special merchandise, sales promotion, merchandising and display, employee training and every other department of successful superstore operation. Dart and his associates say that the service offered the Rexallite is not duplicated or approached by any other store or chain in the Rexall member's trading area. To give further support United-Rexall is using a topflight program of national advertising that they claim is winning public approval for the complete high quality line of Rexall merchandise.

Mr. Dart has set up a Rexall creed which he describes as follows:

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"To build the greatest merchandising and service organization in the world, to serve all Rexallites.

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Orris Root

(Continued from page 479)

Ester Value	75 to 95	70 to 90	—
% Soluble in Alcohol	70 to 88	50 to 60	—
% Steam Distillable	8 to 13	3 to 7	—
	Characteristics of the Distillates		
Acid Value	102 to 146	33 to 68	182 to 216
Ester Value	16 to 80	60 to 72	4 to 10
% Neutral Fraction	40.6 to 57.4	—	13 to 25.5
	Characteristics of the "Absolutes"		
d_{20}	0.930 to 0.946	—	0.932 to 0.941
n_D^{20}	1.4953 to 1.4989	—	1.4940 to 1.4980
ϕD	+19.40 to 32.75°	—	+17.60 to 36.72°
Ester Value	39 to 72	—	29 to 38
%Irone by Oximation	70.8 to 79.4	—	60 to 79.5

The yields of distillates were established by the technique that I have described (Naves and Mazuyer, *Les Parfums Naturels*, p. 172, Paris, 1939); those of absolutes by a technique published in 1931 (Glichitch and Naves, *Parfums de France*, v. 9, p. 371). The analytical values for the "absolute" of orris "butter" differ from those published in 1931 because of more complete experiments and because of the elimination of the characteristics of commercial products having doubtful origin.

Older than the manufacture of resinoid and somewhat of a regression, the production of the essential oil consumes the greater part of the rhizomes. The oil is a solid at ordinary temperature, melting toward 40 to 45°C., and this appearance has caused it to be called "concrete" oil or "butter."

Deprived of its acids, it is a liquid, and this is the absolute oil.

The absolute oil contains, in addition to the irone, some esters of fatty acids, specifically methyl myristate, and some aldehydes, among others oleic aldehyde. The presence of ethyl esters is exceptional and is caused by certain manufacturing artifices which we will discuss a little later.

There is considerable difference between the volatility of irone and that of the fatty acids in steam. The first fractions to be distilled are the richest in irone, and the content of fatty acid grows as distillation advances. In this distillation there comes a time when the value of the distilled products, diminishing without cease, no longer warrants the cost of distillation. The determination of this moment is a function of the process of distillation and of the economy of the operation. It therefore follows that "butters" of various qualities are found on the market; they have great variation in their content of fatty acids and therefore of absolute oils.

The following table will illustrate how the neutral and acid fractions come over during the course of distillation:

Hours of Distillation	*1 to 8*	*9 to 16*	*17 to 24*	*25 to 32*
% of Oil Distilled	0.073	0.058	0.044	0.031
% of Oil Obtained	0.073	0.131	0.175	0.206
Acidity, expressed in % Myristic Acid	61.0	83.8	91.9	94.3
Mean molecular weight of the acids	241	238	229	225

% Absolute Oil.....	41.0	20.0	8.0	5.4
% Irone in the Absolute Oil	82.0	77.4	53.0	16.1

The market value of the "butter" is, to a large degree, dependent on these yields. Experience shows that the acid content determined according to the analytical index of neutralization is somewhat uncertain because of the variations of the composition of the acid fractions. It is therefore preferable to determine the content of neutral products by isolating them and their analysis by the usual analytical methods utilized for essential oils informs us of their character.

It is delicate to seek to eliminate the acids by neutralization with alkali or alkaline carbonate, as the emulsions make a quantitative separation difficult for an analyst not especially trained for this operation. The method that I mentioned above is based on the separation of acids in the form of their lithium salts, the metal being displaced by its acetates in an etheral solution. This method is easy to apply and has always been satisfactory.

The rotatory power of the oils seems to be due to the irone, but nevertheless the value of the absolute cannot be judged by this figure, because in addition to the fact that a racemic irone can be encountered, there exists not one irone but several, isomers or homologues, as recent experiments have shown.

Use must therefore be made of a multiplicity of analytical guarantees.

I have stated above that it has been shown that irone is attached to a heteroside. No direct proof has been published in support of this assertion. In fact, it does not seem that the treatment by diastases or by reagents favorable to hydrolysis is apt to augment the irone yield in the course of the treatment of the rhizomes that have been dried and stored for a minimum of three years. It can be said that the hetrosides are destroyed during this period.

The idea that a better yield of irone could be obtained after much treatment probably arose from the fact that the irone is distilled more easily after the starch has been hydrolyzed; and when this hydrolysis is accompanied by the production of alcohol, a fraction of the fatty acids was esterified, giving a better yield of absolute oil, incorrectly calculated as irone.

One can compare the yields of irone isolates as a ketonic substance, on the one hand by the distillation of the rhizomes, and on the other by the treatment of the resinoid. These yields are somewhat similar, varying, according to the quality of the orris, between 0.24 and 0.39%.

Certain commercial butters and their absolutes show exceptionally low irone yields. This can come from a particular method of manufacture which introduced into the butter a certain proportion of vaseline oil. Others give light absolutes, hardly refractive, and rich in esters. This is due either to the addition of esters prepared from the fatty acids of the orris, or to the use of roots that have not been decorticated, as the odor of the peel immediately betrays this practice.

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Finally, one finds on the market some absolutes and butters that have been "stretched" by the addition of fractions of oil of carrot, a product which seems to blend remarkably with orris from an olfactory point-of-view. The evaluation of the irone as ketone enables one to detect this fraud.

Given the difficulties of manufacture, the great experience required, the fragile note and the value of the perfume, the complexity of analytical examination, the orris products should not be bought except from a producer worthy of confidence, without too narrowly considering the price, as the method and care of manufacturing are costly and can permit no mediocrity.

Robert Wood Johnson

(*Continued from page 483*)

highly qualified beyond anyone else who could have been chosen." He went on to stress that Johnson was "a small business man engaged in a big industry whose sympathies are along the lines of the small business man and in opposition to the trend toward collectivism in the country."

Under General Johnson's direction, the volume of war contracts going to small business through the SWPC had increased from $10 million to $60 million a week. In the New York region alone, government contracts with small business were being made at the rate of $5,000,000 a year, three-quarters of these going to firms in New York City.

After a tough and stormy administration, hard-working Robert Wood Johnson decided to retire from the Smaller War Plants Corporation in the Fall of 1943 because of poor health. Following a brief rest, Johnson returned to his own company who were engaged in war work.

Since the end of World War II, General Johnson has been busy making plans for the further decentralization of his company. The latest move in that direction is the setting up of Tek Toothbrushes as a separate operating division. It is felt that this unit now resting on its own merits will proceed ahead at an even more rapid pace.

Looking to the future, General Johnson advises business to adopt the philosophy he expresses in the following creed:

We believe that our first responsibility is to our *customers*—Our products and services must always be good, and we must strive to supply them better at lower cost. Our orders must be promptly and accurately filled.

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